A Trip to Cuba and the Southern States, No. 5.

ALLUSION has already been made to an American boarding-house in the country. A few days passed there, realized to our party the blessings of the English language; most of us were lamentably deficient in Spanish, and though one or two professed to translate to the others the small amount of information contained in the Havana papers (which are mostly filled with long love stories, and give, for foreign news, the price of sugar and the rate of exchange, to the exclusion, almost, of everything which would inform the inhabitants of how the world wags beyond the Gulf of Mexico), it was a relief to find landlord, major domo, chambermaid, and a fine boy who brought us our daily baskets of oranges, &c., all speaking undisguised English. Their information regarding the trees was rarely such as would do *to print*, for they confounded pines and dates with bread fruit, and so on; but we had to confess that a common language was a great bond of good fellowship. This house is on a plantation of four hundred acres, once devoted to the cultivation of coffee, but the owner dying, it has been rented to Mr. Monson. The dwelling is a *hybrid*, meant to embody indulgences for some of our habits, while it conformed to the climate. It bears no resemblance to the generality of houses on the island, which are more like Mrs. Almy's (before inserted), and only of one low story. Framed in the United States, Mr. Monson's house has glass windows, and somewhat of an American air, and visitors may here feel quite at home, and make pedestrian, railroad, or equestrian excursions to the fine scenery and the sugar and coffee plantations with great satisfaction.

There are a few other places where English is spoken; among them is Mrs. Lawrence's, at Guines, where some comfort is to be had, but if you ask the hotel keepers in Havana for such places, they will sometimes flatly deny their existence, in the hope of keeping you within their own grasping charges.

From this point, an expedition was got up to procure some air-plants for sending home. A black was hired to climb trees, and a white man for guide. The laziness of both was characteristic of the climate. The black was about to ascend a tree, when his master wanted to smoke a cigar; no matches being found on any of the party, the lazy fellow left us all in the heat, while he went away for half an hour, to get a light for his master; *after* which, he concluded that particular tree was utterly inaccessible, and a new search near the house where he procured fire, had to be undertaken! Truly, it is difficult, with such tools, to get along, or accomplish much.

Fortunately, there are men in existence, in every age, who depend upon themselves, and who take the exertion necessary into their own hands. The name of Professor PHILIP POEY is well known to all men of science. He resides in Havana, and is attached to the College, all his leisure being devoted to natural history. With so wide a field for research, and with true enthusiasm, it may be well imagined that his correspondence with the learned societies of other countries is of the most valuable kind.

JOHN GUNDLACH is a name also well known to European and American naturalists, his collections being found in the best museums wherever science is cultivated. His great topic is ornithology, but he does not confine himself exclusively to birds. He starts out with a meagre scrip and wallet, and traversing the island like a true devotee of science, reminds one of the votaries who have sacrificed

health, time, and talents, to the acquisition of knowledge and the benefit of their fellow-men, without other reward than fame and a sense of their own usefulness. A few friends of science subscribe for his support, and he returns from his excursions and hard fare loaded with treasures for distribution where they can be further studied and enjoyed. Mr. Gundlach has been known to follow and watch a single pair of birds for a week, till he had become fully acquainted with their habits. The Academy of Natural Sciences, at Philadelphia, has been greatly enriched by his devotion; it now possesses, beyond question, the finest ornithological collection in the world—a hint that we throw out for the benefit of visitors to our city, which many will be thankful to remember. Among the members of the Academy, the names of Francisco A. Sauvalle, Professor Philip Poey, and John Gundlach, are much better known than that of Walker the fillibuster, so often of latter times repeated in newspapers, and so very different in regard to useful works. Mr. Gundlach is a native of Baden.

The former owner of the Carolina House had some ideas of embellishment; his planting of avenues of palms, and his long approach to the house through orange-trees and some rarer kinds, will gratify the visitor extremely. In the neighborhood are good specimens of coffee and sugar estates, pine-apple fields, yucca and aloe hedges, and some of the best scenery; from the tops of the high hills very fine views are obtained of Matanzas, the Gulf of Mexico, and the Caribbean Sea.

You have only to wish, and a cocoa-nut full of milk is poured into your tumbler; give little "Charley" a basket, and he brings you it filled with oranges; walk into the garden, and you may help yourself to ripe bananas; and if your taste has come round to the sapote and the mammea apple, with their sickly sweets, they, and very many other fruits, can be had for the asking, including tamarinds, &c., and nuts that you never heard of or saw represented. If Mr. Monson should be encouraged to persevere in making his establishment what it ought to be, it will be filled every winter with respectable boarders. The very last sugar-mill worked by oxen, is within walking distance, affording a strong contrast to the more modern steam operations now so universal. The labor and lungs employed to keep the animals up to their slow circular motion, are a caution to work whenever it is possible with lifeless materials. Two blacks, and a son of the proprietor to watch operations, were required to keep the sluggish animals in a very slow walk, to say nothing of the goads replenished at short intervals, and applied with loud yells and screams from all three in regular turn. This gentleman makes syrup only, and, it is thought, would have to give up his melancholy team but for the present high prices. On this small estate there are some very fine shady avenues of fruit and other trees which we saw nowhere else.

The crow of the game-cock may be heard at all the Havana hotels and the plantations; several wealthy proprietors have cock-pits of their own, and of course betting is rife and fashionable. We heard a good story of a party near Trinidad, who were carrying to the town some fifteen hundred dollars won at a pit, when they were attacked and robbed by the losers, though the Governor of Trinidad was close behind their volante. Stories of robbers are not so rare that one becomes utterly careless of his safety, or inclined to make long excursions alone. The police are not to be found at every turn, and it is true that marauders discharged from the army, or let loose from prisons, roam about, mostly at night, and waylay the unarmed. Caution is recommended, but Mr. Monson assures us he has ridden for years unarmed, by day and night, without the slightest molestation.

A rather amusing rural scene, showing the love of the fighting cock, was exhibited on our ride to the Carolina House. A family from Havana was in the

cars, apparently emigrating to their country estate; the station reached, the most elegant carpet-bags and trunks we had ever seen were tossed into a bullock cart of the roughest construction. The ladies found volantes in waiting, and a very young gentleman mounted a led-horse with saddle and holsters; when fairly in the stirrups, a game-cock (his only apparent baggage) was handed carefully to him by a servant. A shrill crow of defiance to all the *games* in the neighborhood, was the last we heard of our car companion, who had smoked all the way, and was extremely polite in supplying fire to a damosel who relished the weed amazingly. The practice of ladies smoking is not very common—in public, at least. Another instance we had, in the Isabel, of a very pretty Cuban lady, who took her strong cigar after every meal, while parading the deck, and, we must say, her pretty white fingers were not ungracefully employed in twirling it about; her husband smoked at the same time, seeming to think it quite the thing that she should be similarly employed. And pray tell us, fastidious critic, is there any good reason, if the men will smoke, why ladies should not? We heard one on board ship threaten to *eat garlic* if her *cara sposa* would indulge with tobacco!

After talking of robbers late one evening at Mr. Monson's, one of our party who had laughed at the idea of danger, sallied out next day, before breakfast, for a ride on horseback, and soon lost his way. At a rough-looking shantee, he made out to say: "Hotel Americano!" and was civilly shown his road, though considerably alarmed at the barking of a brace of savage-looking bloodhounds that were inclined to track after him. Entering a wild piece of tangled wood, he encountered, at a short turn, a Spaniard mounted on a capital animal, with his holsters evidently full, and a sword, or machette, in his girdle. He began to think the specimen of rather equivocal build, remembered the stories told over the back-gammon board, and shivered, he says, *only once;* he then summoned courage, and, putting on a brave and amiable look, said, in his meekest tones, with a query at the end: "Hotel Americano?" The ferocious "robber" took off his hat, and bowing to the holster tops, drew his sword! and pointed in the proper direction, indicating a little turn in the route, close by, with a *scimmetrical* motion that was not quite to our traveller's taste, but which closed by both pursuing their peaceful paths. The American did not seem to have *minded it much*, but ever afterwards we remarked he preferred to ride in company with others!

From Mr. Monson's, short rides on the railroad afford excellent opportunities for observing the peculiar appearance of the country, and the novelty of the vegetation. Occasionally, you come in sight of very beautiful avenues of the Royal Palm, planted with great regularity, sometimes in double or triple, and even quadruple rows; the effect is very striking, comparable to nothing but Egyptian architecture, without much roof. Nothing that could be set down in our regions (if that were possible) would produce such a sensation as a row or two of these superb columnar trees, with their waving branches of green, and their fruit stem. At El Carolina House, there is an avenue of these Palms along the whole road front, giving an air of great stateliness to the property.

One of the very prettiest places we saw, adjoins Mr. Monson's; it is a small coffee estate, extremely well planted, and full of fruit. The owner has a small dwelling to eat and sleep in, but the open air seems to be the *home* of the family. Here we observed again the enormous quantity of bees that can be fed from the coffee, orange, and other flowers. About one hundred swarms were working away most industriously, with no other attention than having been placed in a hollow log about three feet long, and open at both ends. This log is merely placed level on a couple of stones, at an elevation from the ground of about six or ten inches.

There appeared to be no fear of the moth, so destructive an enemy among us. The product of honey and wax from Cuba is very great.

The orange-tree does not fare so well. It is attacked by a coccus, which envelops the whole wood, and has once or twice destroyed nearly all the plants on the island, no attention being given to its extirpation. Some twenty years ago, it obtained the mastery, when orange-trees became extremely rare, the export of the fruit being abandoned. Whole fields hedged with this valuable fruit, disappeared; those now seen were soon afterwards planted, and are again destined to destruction for want of care—shall we say, for want of a *Horticulturist* to warn the proprietors of their danger, and the remedy?

We might give long botanical descriptions, but why enumerate where the catalogue would include such great variety? Every garden might have, and many do have, such plants as the lemon-scented verbena as a common bush; the Magnolia fuscata and the Pittisporum, are as common as box-bushes with us, sometimes attaining a height of twenty feet. There is also a tree mignonette, *Reseda arbusta;* the almond grows with the slightest attention; various fruits of the Sapotæ family, or Star apples, are common, as are wild plums, the caimeta, and an Anona called Sapota; the latter is agreeable, but, in general, it may be said that the numerous fruits that are so tempting to the eye of the new-comer, are not very good eating. They possess a sweet, sickly flavor that very few relish. Visitors are apt to keep to their well-esteemed oranges, bananas, and pine-apples. Doubtless, a taste may be acquired for many others by degrees.

GARDEN VEGETABLES, NO. 10.—THE MUSHROOM.

BY WM. CHORLTON.

THE Mushroom, in a natural state, is very generally distributed over many of the more temperate parts of the world. The species that is most commonly accepted is the *Agaricus campestris* of botanists—a cryptogamic plant of the natural order *Fungi*. That part made use of, and which develops itself above ground, is the fructifying organs, the real and true plant being beneath the surface, in the form of delicately reticulated and slender, white threads, that traverse very rapidly any matrix which is conducive to their welfare. It is an edible that is almost universally relished, although we cannot say much in favor of its nutritive properties; it may be either made up into a dish for the table, used as a flavoring in many kinds of cookery, compounded into catchup, or preserved in pickle. In all cases, there is a fine, savory taste imparted to whatever it accompanies.

Considering the great request for Mushrooms, it is not a little singular that the cultivation of them is not more generally understood; more particularly so, as they neither require an extent of garden ground, nor yet the influence of the sun's rays, to bring them to perfection. Any person who has got a good cellar that is free from frost, may grow them through the winter; and at other seasons nothing is needed but a closed-in shed, or, in a small way, a few boards nailed together in the form of a A cover, to keep off heavy rains and drying winds. Such conveniences are enough to supply any ordinary family, but when a great quantity and uninterrupted succession is wanted, it becomes necessary to erect a house for the purpose. In such case, a double-span roofed shed, some ten feet wide, and in length according to the demand, is the best adapted, and most economical. The framework of this may be built with common spars, the roof shingled, and the whole double-boarded, with the between casings filled with shavings, sawdust, or, still better, powdered charcoal. Such a structure is similar to an above-ground

ice-house, than which nothing can be more suitable, as it serves the double purpose of keeping out the extreme heat of summer, and the cold of winter, both of which are preventives to success. On each side (inside the house), there ought to be two or three heights of shelves, about four feet wide and three feet apart, with a board ten inches wide, placed in front of each, for the purpose of making so many beds as succession crops. Notwithstanding this contrivance, it is requisite during very severe weather to have some artificial heat, which is sometimes supplied by a common flue placed along the ground, level, and in the middle of the house; but as there is some danger attending this, and the warmth therefrom is of a very drying nature, it is better to fix the lower shelf about three feet high, and, when required, to keep the under space filled with fresh, fermenting, and somewhat dry stable manure, and the droppings as below described, which will give out enough heat and genial moisture to raise the temperature sufficiently. Where expense is not an object, and there is a regular arrangement of houses for the forcing of vegetables in the winter, the Mushroom house may form a part of the whole; and if hot water is employed for heating, a pipe may be introduced into it, which is certainly the most cleanly and perfect mode.

How to make Spawn.—The next preparation is a quantity of good spawn, which may be made as follows: Take equal portions of unfermented horse and cow manure, and fresh earth from a pasture field; mix and work these together. Add sufficient water to reduce the mass into the consistency of stiff mortar. Mould into the form, and about the size of common building bricks; set into an open shed, and turn them over once a day, until nearly dried through; then cut a hole of an inch diameter into the centre of each; fill up with a piece of good spawn, and paste over the aperture with a little cow dung; build the whole into a conical heap, first strewing some littery stable manure underneath, and, as the work proceeds, fill in between each layer with an inch of half-fermented, dry, horse droppings; cover with a few inches of the same, and as much litter as will enable the heap to acquire a gentle warmth, *but not more*, or the spawn will be killed. In the summer time, there is generally heat enough without any fermentation, and care should be used on this point. If all goes on well, the rhizoma will have penetrated through the whole substance in three or four weeks, which may be known by its appearing full of fine, white threads; but if, when examined, it is found to be only so around the piece previously put in, the spawn is not sufficiently run, and it should be left undisturbed a week or two longer. After this time, examine again, and do not let it become too far advanced, or the keeping properties will be very much depreciated. When all is right, remove the bricks into a dry and cool room, protected from frost in winter, where they may be preserved good for several years. I have used Mushroom spawn five years old, and found it as good as when first made. Hitherto, we have only shown so far as to require a small portion of "leaven" to commence with, and there are many persons so situated as not to be able to get this. There are not many places, however, where horses, cows, or sheep, are not stabled, and the manure lying around, and it often happens that more or less has been accidentally protected from extreme wet. These are the spots to look for natural spawn, and, when found, a very small portion is enough for a start. Do not collect any that may be produced from decaying wood or leaves, for, notwithstanding it may run in the prepared compost, there is danger of its not being the right kind. It may be another species of the same genus, and probably a poisonous one; while, by attending to this advice, the true sort is sure to be obtained. The edible Mushroom may always be known by its plump, solid, and fleshy appearance, brittle texture, and, above all, the beautiful pink color of the *laminæ*, or gills, on the under side of the *pileus*, or cap; it has

also a peculiarly delicate scent, while the poisonous species generally emit a rank and somewhat pungent odor, attended by a clammy or greasy excrescence on the outside.

How to make the Beds.—We will consider a suitable sized bed is four feet wide by ten feet long, which will require about one barrowful of material to each two feet in length. Collect for this enough horse droppings, fresh from the stable; place in a heap, in a dry and open shed, protected from rain; let them become somewhat, but not too much heated by commencing fermentation; when so, turn them over daily, still retaining the warmth, and the lumps as whole as possible. In ten or twelve days, they will become nearly dry and mouldy looking; next, cover the flooring of the bed with two or three inches of stable straw-litter; upon this lay the prepared droppings, to the depth of ten to twelve inches, after being made solid; and remember, that the more compact, the better chance there will be of success. In the course of two or three days, it is probable that this bed, so made, will begin to heat; and if it should do so enough to burn the fingers if put into it, make a few holes with a stick, which will soon cool it down. When there is surety that the warmth is on the decline, and has lowered to about 70° or 75°, break up some spawn into lumps of three inches cubic; plant one of each of these, at the distance of nine inches, just below the surface; afterwards, cover with two inches of turfy loam; beat and tread all down until quite hard and solid, and cover with any kind of soft hay or straw, excepting that from salt marshes. And here I would caution against allowing either salt or lime from coming in contact with any portion of the material used for Mushrooms, as these ingredients will most assuredly kill the plant. The most suitable temperature is from 50° to 55°, with a corresponding moisture in solution in the atmosphere. Mushrooms will not develop in a dry heat, while too much wet and cold rots the spawn. I am thus particular in mentioning these details, because not only this but all other fungoids must have their own and peculiar requirements present, or they will not prosper. With these, there is nothing more easily grown than our present subject, and what is recorded above, if strictly adhered to, will undoubtedly lead to success. A bed thus made and cared for, will commence bearing in five or six weeks after being finished, and ought to continue to do so for two or three months. If a regular succession be needed the year round, it will be necessary to make up a fresh bed once a month, and it only requires common intelligence, in addition to the above recorded ideas, to carry out the differences in the way of preparing the material according to the state of the weather. Sometimes it will be found that the young Mushrooms shrivel up while small, and consequently come to nothing more than clusters of small "buttons." This arises from one of two causes, viz: a deficiency of moisture, or by the covering lying too close, and thereby excluding the air. In the former case, the upper crust is dry, and crumbles between the fingers, when a sprinkling of clear water (enough to soak down about two inches) will remedy the evil; and, in the latter, if the surface be wet, the removal of and applying fresh covering, will answer the purpose.

Mushrooms can be also grown in pots or boxes filled with the above-mentioned materials, and in the same way. Pieces of spawn may also be planted under the surface of the soil inside any grapery not at work in the fall, when the probability is, a crop with more or less certainty, until the base becomes too wet by the requisite supply of water for starting the vines. It is well known that Mushrooms are produced in great plenty, naturally, in some localities where cattle feed in the fall, after a dry summer; and if we consider these conditions, it will readily be seen how many suitable places there are around a homestead where the object in view may be carried out, when the nature of the plant is understood.

Without investigation, it might appear that this, and all other fungoids spring up primarily as spontaneous productions. Observation, however, shows this doctrine to be false, for, at the mature state of existence, they discharge an immense number of sporules, or cellular organs, from the parent body, which will develop and increase, in many instances, with wonderful rapidity, according to the species, when they come in contact with suitable food and atmospheric influences. It is a demonstrated fact, that the common Mushroom may be propagated in this way, and which any person may prove, by scattering the black powder that is emitted from an overgrown head on the surface of some of the compost which the spawn is made of; but as this method is not practicable in a general way, it is better to obtain the required substance as above directed.

How to Cook Mushrooms.—Peel off the skin on the upper part; wipe them with a soft towel; rub the whole surface with softened butter; sprinkle some flour, pepper, and salt, over them; lay on a tin plate, and broil before the fire, or in the oven, until they are quite soft. Another way is to stew with a small quantity of milk, using butter, pepper, and salt, to taste. The great fault in cooking, generally, is not exposing them to the heat long enough, which makes them insipid, if not unwholesome.

To Pickle Mushrooms.—Choose the small, rounded "buttons" before they expand, as near equal in size as possible; put them into glass jars, after being wiped carefully and separately; fill up with hot vinegar, of good quality, in which is infused a little cayenne pepper, and some mace, allspice, or cloves, as fancy dictates; cork up tight, and they will be ready for use in two or three weeks.

To make Catchup.—For this purpose, the Mushrooms ought to be fully, or a trifle over-grown. If quite black, none the worse. Put them in an earthen vessel, and cover with a solution of salt and water; leave them covered up for two days, and then press them until all the juice is extracted; boil the liquor gently for an hour, and add any spice, to please. Sometimes, when the boiling has been insufficient, the catchup will not keep, which renders it necessary to be particular; fill into bottles, and cork up tight. If properly done, it will be good for many years.

[This article, from the pen of Mr. Chorlton, contains the best and most practicable modes of growing the mushroom, and supersedes the necessity of consulting any other treatise. We are constantly struck, as Mr. Chorlton proceeds, with the value of his articles on vegetables, and are entirely convinced that they would do well to be collected into a separate volume as a *vade-mecum* for gardeners and others.—Ed.]

THE MAPLE AS AN ORNAMENTAL SHADE, AVENUE, AND STREET TREE.

BY D. W. RAY.

For symmetry of form, varied and interesting aspect of tree at different seasons of the year, for density of foliage, for beauty in the expansion of its buds in early spring, and in the many colored hues of its autumnal foliage, we have no native forest-tree that can compare with the Maple (Acer) family. We like the sober, gray look of its trunk and branches, even when entirely defoliated.

The Maple is nearly as useful to man as the plant of the sugar-cane, and annually produces, in this country, large amounts of sugar, much superior in flavor to that manufactured from the juice of the cane. The aborigines of the country understood its manufacture long before the landing of the Pilgrims, and the manu-

facture of sugar from the Maple is now extensively practised by the Chippewa Indians, in all their primeval style. It is usually made to barter with the whites of the frontier forts and stations, and finds a ready market at the confectioners, to be made up into toothsome preparations.

The Sugar Maple (A. saccharinum) is the only variety of Maple which is used for this purpose. This variety is the loftiest growing of the Maple family, and is found in this country, from Maine to Georgia; there are two varieties of this: one called Black Maple (A. nigrum), which is smaller in size, reaching only a size of fifty feet; while the other variety grows to the height of eighty to one hundred feet. The Acer family, like the Quercus or Oak, is very numerous, numbering some seventeen varieties, and about forty sub-varieties.

The principal varieties of the Maple which can be cultivated for ornament, shade, avenues, grouping, &c., are the (Acer rubrum) Red-twigged Maple, the Spike-flowered Maple (A. spicatum), the Striped-barked Maple (A. striatum), the Norway Maple (A. Platanus), the Sycamore Maple (A. Pseudo-Platanus).

The latter is undoubtedly one of the most ornamental of the *whole* variety of Maples. The longevity of the tree is from one hundred and fifty to two hundred years. As an ornamental tree, it may be planted in groups or avenues, but produces the best effect when planted singly, so as not to touch any other tree; the variety with variegated leaves is the most ornamental.

Nearly all the varieties of the Maple are rapid growing trees, forming dense, regular, and symmetrical heads, almost impervious to the rays of the sun.

Public opinion is much in favor of planting this tree as a park and street tree (also for avenues), from the fact that they are almost entirely free from caterpillars, worms, and all kinds of insects, retaining their foliage until quite late in autumn. I prefer Maples, as street trees, to elms or horsechestnuts.

I have seen villages and small cities, in Central and Western New York, whose street trees, in point of *beauty* of *tree*, density of foliage, and comfort of shade, will compare with many of the older settled villages of the East. Although they may not have the enormous size and venerable appearance of the American elms (Ulmus Americana) to be seen in Northampton, Greenfield, and Deerfield, Mass., yet they present a more varied, and, in the autumn, a more pleasing sight to the eye, covered as they are with their yellow and scarlet frost-tinted foliage. And when they shall have attained the gigantic size of their more favored brethren, they will attract the same notice and attention.

I am aware that all lovers of nature have some particular tree, plant, or flower, which they admire above all others. I confess to having a greater *penchant* for the Maple for shade, avenue, and street trees than for any other variety of forest-tree.

I still remember how oft, in our school-boy hours, we sought the refreshing shade of the Maple, and gambolled beneath its wide-spreading branches. I well remember, too, with what eagerness I sought and drank the delectable fluid given forth from its gigantic trunk.

Loudon says: "The wood of the Sycamore Maple is white, has a compost of a fine grain, susceptible of receiving a high polish, and easily worked. It does not warp, and is not liable to be attacked by worms or the borer, as is the case with the Locust."

I do not see why the Locust has been so extensively cultivated at the West, in forming artificial forests, in preference to the Maple. The latter is more rapid in growth; its sap is valuable for sugar; its timber brings a high price in market; it is valuable for fence posts, if the part to be put in the ground is slightly charred.

The time for planting the Maple is in early spring, or as soon before the ex-

pansion of the bud as may be. It will be found, in removing from the woods, that the trees will necessarily lose some of their fibrous and lateral roots; to obviate the danger arising from this loss at the time of transplanting, the top of the tree should be pruned, so as to take off as much in amount as the tree lost of the root in taking up, thus equalizing the circulation between root and top; this course will keep up the balance of the tree. The size of the tree to be transplanted in this manner, to insure safety, should not exceed two inches in diameter at the base of the stem. If trees of larger size are wanted, the best mode of procedure is to trench in a circle about the tree, the previous spring, to time of planting, cutting the trench at a depth sufficient below the surface, to cut off all the horizontal roots; the result of this severing all the main lateral roots, is the multiplication of the fibres upon the remainder; the fibrous roots are, in fact, the life of the tree. The tree should be then taken up the succeeding winter with a ball of frozen earth upon the roots, and planted in this condition. The manure to be applied to forest-trees should be composed mainly of leaf mould or swamp muck, and should be applied as nature applies it in the woods, as top dressing or mulch. This will insure their entire safety.

If our large cities and towns would eschew the planting of such trees as the Ailanthus and Lombardy Balsam or Poplar, and some other varieties I might mention, and plant Maples instead, it would add much to the beauty and pleasantness of their streets, and possibly increase the rent roll of many a miserly landlord.

HUMEA ELEGANS.

For purposes of general out-door decoration, or for planting round or near fountains or other ornamental water, the Humea Elegans stands unrivalled. Its gracefully drooping tresses of silky brownish-orange colored flowers, which glitter in the sun when moved by the breeze, give it a charm beyond description. It is not, therefore, to be wondered at that it should find favor with the many, or that inquiry should be made as to the best mode of growing it.

Although introduced from New South Wales nearly sixty years ago, it is only of late that this fine biennial has been employed to any great extent for out-door decoration. Whether, however, as forming a background to long flower borders, as a single specimen let into the lawn, or occupying the centre of a bed or vase, it is most charming; and not one of the least of its qualifications is that it may be had in beauty from May till November.

In the month of June, sow the seed in a pan of light soil, and place it in a warm frame until the plants are in rough leaf; then remove them to a cool frame where they can have plenty of air, and slight shading during hot sunshine for a fortnight, when they will be ready to pot off singly into thumb pots, using light rich soil, and plunging the pots to the rim in sand or sawdust, in a cool frame. Keep them close and shaded until sufficiently established, when they may be gradually exposed to sun and air; after that they will only require to be covered with a sash during cold or wet weather. Shift into larger pots throughout the autumn and following spring, as they require it, taking care never to let them become pot-bound, as their beauty is much lessened by being in any way stinted, either in pot room, moisture, or richness of soil. By means of liberal treatment, they will retain their foliage in a healthy green state until finally destroyed by frost. During winter, a low temperature, plenty of air, and being kept near the glass, suits those intended for planting out better than heat and a close atmosphere. Give plenty of water before turning them out of the pots, and also for a week or two after planting,

until they are fairly established in the soil, which should be turfy loam mixed with well-decayed manure or leaf soil.

When kept under glass to flower in pots for in-door decoration, they are not half so beautiful as when exposed to the open air; their color in doors being a kind of greenish-pink, gives the plants a sickly appearance. Slightly fumigating them during the spring months, will keep them free from insects, which are apt to infest them, especially the under sides of their leaves.—M., *in Gardeners' Chronicle.*

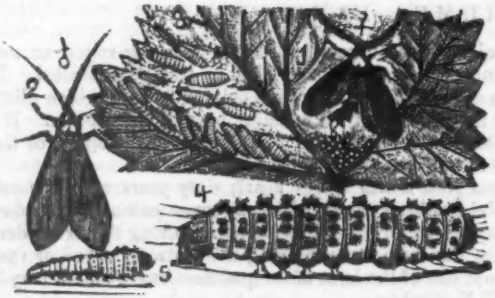
INSECTS, NO. 3.—ILLUSTRATED.

GRAPE VINE CATERPILLARS, ETC.

BY T. STAUFFER, MOUNT JOY, PA.

As early as the 6th of July, and as late as the 15th of September, we often find herds of small, greenish-yellow caterpillars on the under side of the grape leaves, feeding side by side, in considerable numbers. It is well, however, to observe that there are two distinct classes of gregarious larvæ found on the grape. Those of the Procris Americana, a Lepidopterous insect, and those of a species of saw flies (the Selandria vitis) belonging to the Hymenopterous orders.

Fig. 1 (♀) represents the female Procris depositing her eggs in the axils, and along the veins of the leaf. So intent are they, that they continue the operation though the leaf be cut off and carried to some distance, as I have observed. The spot is first touched, perhaps with a portion of gummy fluid, and the eggs then deposited thereon, in succession, until some twenty-five or thirty are planted. Those, in the course of a few days, drop their lids, and the minute larvæ come forth, as seen (Fig. 3) on the same leaf. They undergo their several changes until matured.



Procris Americana.

Fig. 4 is a magnified view. They are cylindrical, with a few scattered hairs, with a transverse row of warts, armed with short, stiff, radiating, black prickles on each segment; head and tail, dark. They have sixteen feet. The female Procris (♀) is a wasp-like moth, with narrow, blue-black wings, a saffron-colored collar, and notched tuft of hairs on the extremity of the body. The male (♂), Fig. 2, is larger, has a yellow collar, and dark, fawn-colored wings; the antennæ scarcely toothed; those of the female strongly so, or pectinated. This replaces, in America, the Procris vitis of Europe, so destructive to the vine in Tuscany.

In their diurnal flight and general appearance, they approach the Ægeria; there is, however, no relationship in their transformations and habits. The larvæ of Procris devour the leaves of plants, and make their cocoons of coarse silk, of a flattened form and tough texture, found in crevices and under the leaves, being more like the Phalænæ in their habits, among which they are arranged by some naturalists.

This is also figured (except the male) Plate 6, and described page 78, *Patent Office Report* for 1854, wherein it is recommended "to destroy the caterpillars by syringing the leaves with a solution of whale-oil soap, and then trampling under foot those which fall to the ground, or by picking off the infected leaves by hand, when not too numerous." (The latter is my plan.) In reference to this subject, it is also mentioned "that the French have a method of destroying small moths in their gardens, by the use of cords dipped in honey, and stretched from tree to tree. These cords at the same time attract the insect by their sweetness, and entrap them from their adhesiveness."

Fig. 5 represents the larva of Selandria vitis, also a great pest to the vine; they are of a greenish-yellow color, tapering behind; an olive blotch on the last and front segments, each with two transverse rows of single spines, which are black, and more conspicuous on the first three rings, perfectly naked. Those have twenty-two legs, and, when fully grown, are about five-eighths of an inch in length.

The fly, or parent, is of a jet-black color, except the upper side of the thorax, which is red; legs, pale-yellowish; the wings with brown veins of a smoky color. These flies rise from the ground in spring, and lay their eggs. (See *Harris*, p. 370.)

The slug-worm (those little, snail-like, tadpole-shaped, slimy caterpillars), quite too common on our cherry and pear-trees, belong to the same family—Blennocampa ceraci, or Selandria cerasi, the first name being most appropriate. A neighbor of mine saved a young pear-tree by dusting black pepper over them when the dew was yet upon the leaves.

[Mr. Stauffer is an accurate observer, and what is quite remarkable and interesting, he furnishes wood-cuts for his illustrations, made by his own hand. He has our thanks for these contributions, and we hope he will continue them.—Ed.]

THE PEAR SLUG.

BY JOHN C. HANCHETT, SYRACUSE, NEW YORK.

In the *Horticulturist* for September of last year, there appeared a very interesting article, from the pen of a lady, upon the natural history of the Pear Slug. I refer to it here, in order to make a slight correction in one particular—a correction, important only as the account is not strictly exact. "Their eggs," she says, "are placed, singly, within little semicircular incisions through the skin of the leaf, and generally on the lower side of it." This account is also given in Cole's *American Fruit Book*, and I am sure I have seen it elsewhere.

I inclose two leaves taken from a young pear-tree, which, you will observe, are covered with what appear to be small, perforated, white scales lying promiscuously all over and *upon* the *upper* surface. These are the remains of the eggs from which the young slugs have passed to their work, the perfect egg appearing simply like a perfect scale. It has been for my interest to watch the advent of these creatures for some years past, and I have found the first evidence of their coming to be the appearance of these scales, placed superficially upon the *upper* surface. I have never discovered any incision in the leaf, nor even an accidental deposit, in a single instance, upon the *lower* surface. There are evidences of nearly a hundred of these eggs having been deposited upon each of the leaves which I send you; and, from their number, you will readily and correctly surmise that the destructiveness of the insect, even in the first four hours of its existence, must be very great. Though the lower leaves of the tree are those chiefly upon which the eggs are deposited, yet, as you can judge from the sample before you, an entire tree would be speedily divested of its foliage, if the insects, as they increase in

their capacity for destruction, were left unmolested. Happily, if attended to in season, though their number be countless, as they were in the nursery from whence these leaves were taken, they can easily be arrested in their progress by the liberal application of slaked lime. It is by no means essential, however, as I see it universally recommended, that it be applied "when the dew is on." A moment's reflection will convince any one that (it being the *creature* and *not the leaf* that the lime is designed to assail) the dew must be unimportant if not an actual hindrance to its operation. Whatever lime is arrested by the dew-drops, becomes inert, and speedily hardens into a harmless mass, which the slug may pass over or avoid, at pleasure. When the leaves are dry, on the contrary, the lime which lodges upon them will be shaken off by the first agitation in the air, and a portion of it will be likely to find its way to the slimy back of some depredator that had hitherto escaped unscathed. Thus far, therefore, the presence of the dew interferes with the full execution of the design.

As great things are made up of small, so let the facts here stated, if found (as they are believed to be) "fixed" ones, take their position in the great aggregate of exact knowledge.

MANAGEMENT OF CAMELLIAS.

An excellent paper in the *Midland Florist*, on the "Management of Camellias," contains the following advice: "In a general way, we can afford to cut all the shoots a good way back, some as far back as to leave only two or three eyes. Camellia japonica is a plant that wants great attention, or it will become ill-formed. The shoots at the ends of the branches start before the bloom has opened; the flower is the smaller and weaker for it; the new shoot takes up the growth, and merely lengthens the branch that is already long enough. And it is the same with the other branches; they all lengthen, no side and lower shoots come, the plant grows tall, without getting more bushy, and in two seasons is spoiled. When the spike next the bloom bud begins to push, remove it; never leave the end shoot on, unless you want to lengthen the branch. By picking them off, the whole strength of the plant is thrown into side shoots, branches, and flowers; but this is not all that is to be done. Shorten every branch that is too long; cut out any weak wood that clogs up and confuses the centre; make the plant of a good form, by cutting back whatever is ugly, and if the pot is full of roots, shift the plant into a larger one; but as Camellias are now set for bloom, and have done all their growth, set them in the shade. See that they do not want for water, and let them rest and harden. There are some plants that, like the Camellia, are out of bloom before it is safe to turn them out of doors; these must make their new wood in the house, and be well grown and perfected before they are turned out. The perfection of a turn is, however, under a canvas awning, like a tulip frame, because, when closed up, the sharp winds take no effect on them. With a convenience of this kind, most plants might be pruned and turned into the canvas-house, as they decline flowering; but they will require some attention. They must have protection from the wind, when north or east, and from the sun during the heat of the day; they must have all the air they can get, and in fine, genial weather, except the few hours of mid-day sun, they may be open altogether; they may also have warm showers, but they must be shut up in their canvas abode whenever the wind is high, and also when in the wrong quarter. When the plants have made their growth, they may be more exposed; still, they must not have the hot sun. But after all is said and done, the pruning is by far the most important operation, because, this done well, your plants will be handsome, however large

they grow; neglect this, and they will be barelegged, nothing but naked wood at the bottom, and totally unfit to show singly, even on your own shelves. What is the consequence? When you arrange your greenhouse for the winter, you crowd them, to hide their naked stems, and make bad worse. They may make a pretty bank of flowers, because you see nothing but their tops; whereas, prune them every year before they make their new wood, keep them well down, for the top eye or bud left is sure to grow the most vigorously, and for this you must make allowance when cutting back or pruning. As, therefore, you must, properly speaking, begin in the spring, prune everything as it goes out of flower; Hoveas, Acacias, Camellias, Correas, Chorozemas, Cytissus, Cestrum, Epacris, Nerium, Pimelia, and many others."

PEAR BLIGHT AND HONEY DEW.

BY YARDLEY TAYLOR, LOUDON COUNTY, VIRGINIA.

Is there any connection, either in cause or effect, between blight in pear-trees and the substance called honey dew? We have had both here, to an unusual extent, and the latter more largely on pear-trees than any other, though found on almost all kind of trees. I have two large pear-trees, planted more than thirty years ago (one a wilding), brought in from the fields when small, and planted in the orchard. This has grown freely, and was never affected with blight till this season, and now, large upper limbs, near two inches in diameter, are dead; two of the branches grafted, of late years, with the Bergamot and White Doyenné, are somewhat affected, but not so badly. The other tree was an ordinary fall pear, grafted on the root of a white thorn, and is probably now mostly on its own roots, as the graft was inserted beneath the surface of the ground, and the tree has grown freely but not rapidly. This is scarcely touched with the blight, except some of its upper branches that have been grafted latterly with other varieties, to bring them into early bearing. This tree exhibited the substance called honey dew, to a greater extent than I ever noticed before; the young shoots of the present year, the stems of the leaves, and the surface of the leaves themselves, in many places were literally covered with it, and it fell in drops to the ground. We have about one hundred varieties of pear now planted within the last ten years, and all exhibited this substance more or less. Even the forest-trees showed it on their leaves to an unusual extent, this season.

But what is honey dew? and has the cause of its production anything in common with what we may suppose to be the cause of the pear blight? Without assuming the affirmative, it might be well to examine the subject a little, and obtain what light we can on this or any other subject connected with vegetable growth. The most plausible theory that has occurred to me, is this: We know that in almost, if not quite all trees, the first flow of sap, in the spring, contains saccharine matter; this appears to be elaborated in the pores of the wood, from the matter brought up by the sap previous to the suspension of the circulation by cold. A long, regular cold winter, is most favorable for its production; hence the region 2° or 3° north of us, is better for sugar making from the maple than this latitude. But this winter here, has been, for length and for cold, more severe than they often have there, thus producing more saccharine matter here, in trees, than usual. The past winter has been one remarkable for sugar making in the Northern States. This saccharine matter, in the sap particularly, when abundant, might be supposed to obstruct the circulation, and even if not sufficiently to produce the blight, it at least does so enough to cause the leaves to fall off. The

observance of this fact first led me to examine the cause, when I found the young shoots with the stems and much of the surface of the leaves coated with this adhesive substance, which appeared plain to me must obstruct the evaporation of the sap from the leaves, and, at the same time, prevent the absorption of the carbonic acid gas of the atmosphere, thus producing a weakness in growth that caused many of the leaves to fall.* Perhaps the week or ten days of mild weather we had in the midst of winter, was favorable for the production of sugar in the sap, as it is well known that such weather after cold weather, is favorable for sugar making.

The wood of the pear-tree is hard and compact, and the pores small; and may it not be possible that, under certain circumstances favorable to a large production of saccharine matter in the sap, the sap may be so thickened by it as to stop the circulation entirely, and then putrefy? Large numbers of the small spurs on our apple-trees are affected the same way this year, disfiguring our trees very much and very generally. There must be a cause for this; and may not this be the reason why our fruit set so badly this year? Trees that were heavily loaded with bloom, scarcely set any fruit; indeed, I have seldom known so general a failure, except from late severe frosts; but, this season, we had none after blooming. Some suppose the failure was caused by rainy weather; but that does not appear satisfactory to me. We had rain, also, when our grape-vines were in bloom, and we have seldom had them to set so freely. I should like to hear, through the columns of the *Horticulturist*, whether the effect has occurred in other places.

It has very generally been supposed to be favorable to the blight, when, after a dry summer, a wet fall, favorable to late growth, occurs, and then an early and severe winter; but this was not the case the past season. We had both a dry summer and fall, no late growth encouraged, and the wood certainly was well ripened generally; the winter, it is true, set in early and pretty severe.

The following varieties of pear have suffered badly with us, this year: Messire Jean and Glout Morceau, Hacon's Incomparable, Easter Beurré, Doyenné Gris Jaune de hivre nouveau, Ananas d'Eté, Beurré d'Esperen, on pear roots; and Swan's Orange, Belle Lucrative, Ananas d'Eté, Beurré de Ranz, on quince. Slightly affected: Louise Bonne de Jersey, Napoleon, Bergamot, Urbaniste, Jargonelle, Bartlett, Heathcot, Surpass Vergalieu, Beurré d'Aremburg, and Ott; the remainder (amounting to upwards of ninety varieties) of those most recommended in the books, are uninjured. Our grounds are rolling, and naturally well underdrained.

VITALITY OF SEEDS.—Permit me to send you three seeds of some Coniferous plants, and also part of the cone, for your inspection. About a month back I had seven seeds given me by a Mr. Brown, who has had the cone in his possession upwards of nine years, and previous to that it formed an ornament for many years in a gentleman's hall in Yorkshire. It is probably forty years since it was gathered from the tree. About three weeks ago, I sowed seven seeds in a small pot, in a mixture of loam, peat, and sand, but, previous to sowing them, I cut a notch through the shell of each seed. They have all vegetated, and were potted off to-day in small and thumb pots. I always cut the rind of all the thick skinned seeds I may save to sow.—EDWIN FANCOURT. [The seeds and cone are those of Pinus Pinea, the Stone Pine.—*London Florist.*]

* This matter not being needed for growth in the formation of wood, was forced out through the pores of the leaves by the ascending sap, and not evaporating speedily, was left on the surface.

REPORT UPON GRAPES OF THE COMMITTEE AD INTERIM OF THE POMOLOGICAL SOCIETY OF GEORGIA.

As several varieties of grapes—some well known to all fruit growers, others imperfectly so, and some entirely new—have been from time to time submitted to the Committee, it has been thought advisable to report upon this fruit by itself, and in so doing, notice in detail all the native varieties known to us now cultivated. We shall strive to do this so fully, that any one under the impression he has a new grape can probably ascertain, from these descriptions, whether his fruit has already passed under the eye of the Committee, and, if it has, determine for himself its name; or, if it proves really distinct, he can so decide, and send it to the Committee, to report upon its qualities and value.

So far as we know our cultivated native grapes, all belong to three species: 1st. Vitis rotundifolia (V. vulpina, of Gray); 2d. Vitis æstivalis; and 3d. Vitis labrusca. The first of these species includes the "Muscadine" and "Scuppernong;" the second, the smaller fruited, juicy "summer grapes;" the third, the common "Fox Grapes."

1st. *Vitis rotundifolia* (V. vulpina, of Gray).—Stem, moderately large; perfectly smooth, even in the oldest vines. Leaves, small, seldom over three or four inches across; thin, smooth; shining on both sides, most so beneath; rounded cordate, not lobed; acuminate, very coarsely toothed; teeth generally larger and smaller, alternately; axilla of the nerves beneath, sometimes furnished with a small tuft of pubescence. Panicles, small, densely flowered, blossoming later than the other species. Berries, large, one-half to seven-eighth inch in diameter; black purple, or light green, without bloom, with a thick, tough skin; musky. Branchlets, minutely warty; (Scuppernong, Bullace, Muscadine, Bull Grape, Southern Fox Grape).

Individuals of this species often produce only male or staminate flowers; but upon examination, this season, of many vines, wild and cultivated, while in blossom, more were found female or pistillate only. So far as observed, all the bearing vines of the species had hermaphrodite or perfect blossoms, and the species is doubtless polygamous. All the blossoms observed were six-petalled and hexandrous. Of this species, the only cultivated variety is the

Scuppernong, a native of North Carolina, now widely cultivated. It is not dicecious, as stated by Downing and other authors, but with perfect flowers. Tendrils, green. Bunches, very small, having generally two to four, and occasionally six, seven, or perhaps nine berries in a cluster. Berries, loosely set, large (five-eighth to seven-eighth inch in diameter), round. Skin, thick, light green, with minute brownish dots. Flesh, somewhat pulpy, juicy, of a honeyed sweetness, rich and luscious, of a somewhat musky flavor and scent. Berries, ripen gradually, and drop singly from the cluster when mature. The vine does not readily strike from cuttings.

There are said to be seedlings of this grape, with black and purple fruit, equal in quality to the Scuppernong itself. For ordinary culture—as it never rots, and is said to produce a good wine, it is probably the best single variety. Single vines cover an immense area of trellis, and sometimes produce over twenty-five bushels a season. Quality, "very good."

2d. *Vitis æstivalis.*—Stem, climbing, lofty. Leaves, rounded, heart-shaped, sublobately-angled; sometimes distinctly three or five-lobed, with rounded sinuses; acuminate, irregularly-toothed, or serrate, with the teeth mucronate; alternate ones often smaller. Above, smooth, or somewhat arachnoid (cobwebby), especially in their younger state; beneath, more or less downy, with loose, cobwebby hairs, either horny or fuscous (sometimes sub-glabrous); the youngest ones always more densely villous; old leaves generally smoothest; green above. Fertile panicles, compound, oblong. Blossoms, open after those of Vitis labrusca, and before those of V. rotundifolia. Berries, small, one-fourth to a little over one-half inch in diameter; round, rather closely set; commonly black or dark purple, with a bloom; generally pleasant. Varieties of this species display unusual diversity of leaf; but the cobwebby, instead of woolly or velvety down of the young leaves and shoots, their general likeness to each other in the form and compactness of the bunch, the usual freedom of the berry from muskiness and pulp, and its smaller size, generally render it easy to refer them to Vitis æstivalis. It already affords varieties which, if inferior in size of berry, are superior in flavor and excellence, more worthy of cultivation for table use, and quite as much so for wine as those derived from Vitis labrusca. It is also the most promising source from which to seek superior new varieties from seed. The wild species is called the "Summer Grape." The cultivated varieties are as follows: First, those usually three or five-lobed:—

1. *Devereaux.*—The only specimens we have seen were from Peters, Harnden & Co., of Atlanta, from which, and from three small vines set out this season, our description is derived, aided by notes from Dr. Baldwin, of Montgomery, Ala. It was found in the woods, over forty years since, by Samuel M. Devereaux, and first cultivated by himself and his neighbors, near Sparta, in this State. As Devereaux kept the stage-house, passengers soon disseminated it, being struck with the wonderful productiveness of the vine. It seems quite distinct in foliage. Younger leaves, sub-three-lobed, older ones distinctly lobed. The young leaves and shoots are light green (not brownish, as in the Warren). Leaves, moderately downy, distinctly arachnoid, hoary instead of fuscous. Bunches, quite long (those sent over nine inches), very much shouldered, compact. Berries, small. Skin, thin, black, covered with blue bloom. Flesh, free from pulp, and abounding in juice, of a color as darkly red as that of the pokeberry, of a brisk and excellent flavor. Quality, "very good." A prodigious bearer; hence, like the Warren, considerably liable to rot. (This is not the Devereaux of "Gardening for the South," which is the true Lenoir.) Ripens about the middle of August. The color of the juice is deeper than that of any other grape we know.

2. *Ohio.*—Leaves, large, three-lobed, deeply cut; young shoots, tendrils, and leaves, green, with no shade of red in them; somewhat hoary beneath. Shoots, long-jointed, strong. Bunches, shouldered, large, long, loose, tapering. Berries, small, round. Skin, thin, dark purple, with a blue bloom, without pulp, tender, melting, and sweet. "Very good," but, like the next, too small a fruit to be very desirable. Ripens just before the Warren. Origin, unknown. Fruit, from Richard Peters, Esq., Atlanta.

3. *Elsinburgh.*—It takes its name from a town near which it was found, in New Jersey. Mature leaf, dark green, five-lobed, deeply cut, but perhaps less so than the Warren. Leaf stalks and tendrils, more red than usual. Terminal leaves, brownish, with but little cobwebby down beneath, and none above. Nerves of older leaves, considerably downy. Bunches, shouldered, rather large, loose. Berries, quite small. Skin, thin, black, with a blue bloom; free from pulp, melting, sweet, and pleasant. Ripens nearly as early as Lenoir; distinguished from the Ohio by being not quite as good, by the leaves being five instead of three-lobed,

and by the brownish shade of the young shoots, leaves, and tendrils, which, in the Ohio, are green. Fruit, from Dr. Ward.

4. *Camaks.*—This vine (evidently a native) was one of those in the garden of James Camak, Esq., at his decease, some ten years since, resembling considerably the Warren, and being somewhat shaded and overgrown. Its distinct character, until the present season, was unrecognized. Its origin being unknown, we have named it after the energetic pioneer in horticulture in whose collection it was found. Leaves, three or five-lobed, deeply cut. Bunches, shouldered, long (seven to nine inches), loose, tapering. Berries, rather small (three-eighths to one-half inch in diameter), round. Skin, thin, light brownish-red, with a light bloom. Flesh, tender, melting, free from pulp, very sweet, and excellent. Quality, "best." Differs from Warren not only in the color of the berry (which is very much lighter), but in ripening more evenly, and in the general shape and character of the bunch, on which the berries are so loosely arranged that they will probably not be liable to rot. The vine, too, is evidently less rampant in growth. Fruit, from Dr. Jas. Camak.

5. *Warren* (Warrenton, Herbemont's Madeira).—It is pretty well established that this vine was first cultivated by Mr. Neal, a farmer of Warren County, of this State, living four miles from Warrenton, at least as early as the year 1800. In the early settlement of the county, he found the vine in the woods near his new residence, and transplanted it. Its productiveness and unequalled flavor attracted attention, and soon it became cultivated in Warrenton, and under the name of Warren and Warrenton, soon spread over the States, where it is now more cultivated than any other grape. In 1805, the late Prof. J. Jackson (formerly of Athens) found it growing under the name of Warrenton (from whence the cuttings were procured), at the farm of a Mr. McWhatty, in Jefferson County; and when he settled near him, Mr. J. procured cuttings from Mr. McWhatty's vine, and commenced its cultivation himself. In 1811 or 1812, Mr. Jackson carried cuttings to a relative in Laurens County, where the well known vine grower, Mr. T. McCall, of Dublin, first saw it in bearing. Obtaining it, he planted a vineyard about 1816, and in 1819 or 1820, Prof. Jackson spent a day with Mr. McCall, and drank with him his Madeira, made from this grape. About a year later, Prof. Jackson sent to his brother, in this place (Athens), rooted plants, from which most of those now cultivated here were derived. We believe the Herbemont identical with this vine, as vines in Clarksville, Ga., from Herbemont (also one obtained by Mr. Camak from Herbemont himself, while living, which is still in bearing), prove nothing distinct from Warren. As the latter name indicates the origin of the vine, and as, under this name and Warrenton, it was widely cultivated, at least twenty-five years before known to Herbemont, and as it is still known as Warren by nine-tenths of those who raise it, the name Herbemont should be dropped.

Vine, rather short-jointed for the species, though the most vigorous grower we have. Leaves, five-lobed, very deeply cut; youngest ones, moderately downy beneath, with a slight brownish tint; half-grown ones, very little arachnoid, of a light yellowish-green; full grown leaves (above), dark green, with nerves densely villous, making the leaf beneath a little hoary. Bunches, medium to large size (the best weighing about twelve ounces), shouldered. Berries, round, three-eighths to one-half inch, or over, in diameter, rather closely set. Skin, thin, very dark purple, with light bloom. If not closely pruned, the grapes on the same bunch do not color evenly, varying from light to dark purple. Flesh, tender, melting, entirely free from pulp; very sweet and pleasant juice, of unusual specific gravity. Quality, "best," for table or wine. An enormous bearer; quite subject to rot, but, even then, more fruit ripens than of almost any other grape. Generally allowed to overbear, and undoubtedly the best of our native grapes.

SECOND. Varieties of V. æstivalis, with leaves sublobately angled, or sublobed; not generally with fully developed lobes.

6. *Lenoir* (Sumpter, Thurmond, Early Black, July Sherry, and Devereaux, of Gardening for the South). This grape, which has every characteristic of a native, is not named from its color, but was discovered growing in his hedgerow, many years since, by a gentleman named Lenoir, in Sumpter District, S. C. He at once brought it into cultivation himself, and distributed cuttings to his neighbors, and (as we learn from our informant, Col. A. G. Summer) it is in that section still more cultivated than any other grape. As this variety, in leaf, fruit, and time of maturing, is decidedly one of the most distinct and easily recognized of those in cultivation, it is evident that the grape known in Ohio as Lenoir, "which differs from Herbemont" (Warren) "only in being of more vigorous growth, wood light-colored, with a light blue cast," is doubtless the Warren itself—a more vigorous grower than which would be hard to find. Col. Summer, who has known the Lenoir for years, and that, too, in the place where it originated, pronounces the grape long cultivated here under the erroneous name of Devereaux, to be in leaf and fruit identical with the Lenoir, and since seeing the latter, we coincide with him in the opinion that it certainly agrees in every particular with the grape known as Lenoir in the nurseries throughout the State.

The leaf of Lenoir is of but medium size, and the most entire of the cultivated varieties of this species, being merely indented, and seldom even sublobed. Young leaves but moderately downy, with a slight brownish tint; the down of terminal leaf not fuscous; older leaves have a yellowish cast beneath, when quite mature, smoothish, and nearly free from the cobwebby down. Bunches, rather small, about six inches long, shouldered, making them some three inches broad at the base. Berries, averaging about four-tenths, but sometimes one-half inch in diameter, pretty even in size, rather compact, or crowded on the bunch. Skin, thin black, covered with a blue bloom. Flesh, sweet, juicy, with a brisk, agreeable flavor. A good bearer, and we have never known it to rot. Quality, "very good;" the birds would say *best*, as they take it in preference to any other grape. Ripe, early in August. Vine, resembles Long's more than any other; but by the less downy character and the yellowish tint of the older leaves, and the brownish character of the younger ones, in Lenoir, the two are easily distinguished, even in rows of cuttings. In fruit, the bunches of Lenoir average not two-thirds the weight of Long's. Berries, smaller, of darker color, and ripen three weeks sooner. Fruit, from Peters, Harnden & Co., Dr. Camak, and Dr. Ward.

7. *Long's.*—The parent vine was found, over thirty years since, by Col. James Long, in the woods of his plantation, near Danielsville, Ga. He removed the vine to his garden, and by himself and family it has since been retained as an esteemed variety, not subject to rot, and of great fruitfulness. A sparkling wine, of good quality, has been made from it.

Vine, of vigorous growth. Leaf, in shape, much like Lenoir, but more apt to be deeply indented; sometimes sub-three-lobed, of large size, thick. Young leaves, at first very hoary, with down, which, in the youngest, is a little fuscous; color of the leaf itself, a clear green, with no shade of brown or red; older leaves, always more cobwebby than any other cultivated variety, giving a whitish appearance beneath, quite distinct from the yellowish shade of Lenoir. Bunch, somewhat shouldered, very compact, of medium to large size, good ones weighing about twelve ounces. Berries, average larger than Lenoir, the best being a little over one-half inch in diameter. Skin, thin, very dark purple, with a blue bloom. Flesh, tender, very little pulpy, sweet, and vinous. Quality, "very good." Ripens last of August, or early in September. Fruit, from Dr. C. W. Long.

8. *Harris* (Old House Grape).—This grape came originally to this place from Iverson L. Harris, Esq., of Milledgeville, whose father, eating the fruit from a vine upon a tree near a deserted house, procured cuttings the next winter, and brought it into cultivation; hence it is sometimes called the Old House Grape. Vine, quite vigorous. Leaves, large, sublobately angled, or sub-*three-lobed near the apex*, which makes it quite distinct; more distinctly cut than the preceding, being sometimes three-lobed; the leaf has a yellowish shade, moderately downy—less so than Long's, and down less cobwebby. Old leaves, rather smooth. Bunches, medium, shouldered, compact; a little larger than Lenoir. Berries, round, three-eighths to one-half inch in diameter, averaging nearly as large as Long's and Warren. Skin, rather thick for the species, black, covered with a blue bloom. Flesh, little pulpy, sweet, juicy, and agreeable. Quality, "very good." A valuable variety, not subject to rot. Middle of August. Fruit, from Dr. Camak.

9. *Norton's Virginia.*—Leaf, sublobately angled, sublobed, and sometimes (but not generally, like Warren, &c.) fully three or five-lobed; green of the young leaves has a yellowish shade. Young shoots and terminal leaf above, and younger leaves beneath, with a fuscous (changing to hoary), cobwebby tomentum. Nerves, strongly marked, reddish beneath. Older leaves, nearly free from down. Bunches, long, occasionally shouldered; somewhat compact. Berries, pretty uniform in size, about four or five-tenths of an inch in diameter. Skin, thin, nearly black, with a blue bloom. Flesh, quite pulpy, vinous and harsh—not even "good;" not worth cultivating. Said to be a hybrid between Bland and Miller's Burgundy, but is totally unlike either. As Le Conte observes:* "Although, among some families of plants, hybrids occur naturally, or may be formed artificially, yet it is difficult to understand how this ever can be the case in the genus Vitis. In forming a hybrid, it is necessary to emasculate the flower we wish to produce fruit, and to impregnate its pistil with the pollen of some other species; this is impossible in the present instance, on account of the minuteness of the flower, and the parts of fructification." Nor is this all. He might have added another difficulty. The petals are caducous, and cohere at their tips, forming a little cap, which, in the act of falling off whole, draws over from one side or the other, almost invariably, the pollen from its own stamens upon the pistil. The chances then are, that an operator on so minute a flower, in the act of removing this cap, and then the stamens, would have already fertilized the pistil before applying the pollen of the species or variety selected. We would not, however, assert that hybridization, naturally or artificially, is absolutely impossible, but nearly so; and such being the fact, in general, Norton's Virginia gives us little evidence of being a special exception as any variety we know, being totally unlike its reputed parents, and agreeing sufficiently well in character with the species æstivalis.

Doubtless, the Delaware as well as other varieties not yet known to the Committee, pertain to Vitis æstivalis; but the foregoing are all that have yet come under our observation.

Hon. Mark A. Cooper, *President.*—Dear Sir: The Committee *ad interim* of the Pomological Society of Georgia, beg leave to submit the foregoing report upon the grape. They hope, by a further report upon the varieties of Vitis labrusca, the coming month, to close up the subject for this season.

Wm. N. White, *Chairman.*

Athens, *Sept.*, 1857.

* See Proceedings Acad. Nat. Sciences, Philadelphia, February, 1853.

A DRESSED ROAD

MAY be made in this country with great advantage without the use of many evergreens. In a long approach to the house a bed should be deeply dug and manured as for a garden. Let it be eighteen feet broad, and as long as you choose; it looks best in a turn of the road, and, when practicable, there should be some point of view from which you can look down upon it. For such a bed select blooming plants that will give a succession of flowers all the season, and regard might advantageously be had to the fact that some plants require little or no water in average seasons, the only care necessary being to keep out weeds and have the ground frequently stirred. A fine example of this kind of beauty is exhibited at Mr. Joshua Francis Fisher's, near Philadelphia. We pencilled down the plants which compose it; the smaller growing kinds are to be placed nearest the road:—

List of Plants and Shrubs for a Dressed Border of some extent.

Spireas, all the varieties,
Roses,
Rhus Cotinus,
Altheas, for fall blooming,
Hollyhocks,
Fringe trees,
Lilacs, of sorts,
Syringas,
Deutzias,
Peonias,
Clethras, Alnifolia and Acuminata,
Colluteas,
Dwarf Horse Chestnut,
Lilies,
Hypericums,
Calycanthus,
Berberis, purple, &c.,
Dwarf Shining Willow,
Weeping Fountain Willow,
Hydrangeas, in shade,
Oak-leaved Hydrangeas,
Variegated-leaved Hydrangeas,
Chrysanthemums,
Dahlias,
Wiegelia Rose and Amabilis,
Upright Honeysuckles,
Cockscombs,
Small Thorns,
Petunias,
Verbenas,
Cornus Sanguinea,
All the hardy Yuccas,
Ardisia Fructo Albo,
Erica Vulgaris; is found to be hardy,
The Daturas may be introduced,
Buffalo Berry,
Stuartias, Virginica, and Marylandica.
&c. &c. &c.

Select plants of similar habit to the above, and in general those that attain but small height. There are numerous others, and, to render the scene attractive in winter, a few low growing evergreens should be interspersed, such as—

Arbor-vitæs, of all the newer species,
Low growing Pines,
Small bushes, such as the Yews, &c. &c.

DOWNING'S SEEDLING GOOSEBERRY.

BY L. B.

OF all the foreign or native Gooseberries which we have had opportunities to taste, for some years past, from Canada to Delaware, no variety, in our opinion, can compare with Mr. Charles Downing's Seedling, obtained from the Houghton's seed some three years ago, establishing once more the fact once so startling to the pomological world—so much disputed and ridiculed—but, in our opinion, so perfectly logical, that "the artificial products of nature improve by successive generations of seedlings."

The berries before us (which kept *ripe* for more than ten hot days without any sign of decay) are about double the size of the parent (Houghton's); pale, or light green, without any blush, and smooth. The skin is very thin, and the fruit

Downing's Seedling Gooseberry.

as delicate and tender as any European Gooseberry, in its native soil. The flavor and aroma are perfect; sweet, with plenty of vinous subacid. In enjoying a goodly supply of these berries, we, for the first time for six years, could not regret the relative and very marked inferiority of the best English varieties in our very different climate.

We experienced the same satisfaction as we did in tasting the Delaware and Rebecca Grapes, coming up so very nearly to the European standard as to be almost taken for good foreign varieties.

Let us have our *native* varieties of all kinds of fruit. Already the pear, the strawberry, the raspberry, and chiefly the apple, have come in handsome competition with, or superseded, their European relative varieties. We never could see, after those successful experiments, what could prevent us from having just as fine gooseberries, grapes, &c., and better, too, than the transatlantic products! Gentlemen amateurs! do try all kinds of seedlings; the *Phœnix* is yet in its "ashes." Patience alone, and (in the impressive words of our honored President, Col. Wilder) "eternal vigilance," can only bring out the desired results.

Thanks to Mr. Charles Downing for his constant efforts. The present seedling is one out of a lot of seedlings from the Houghton, but it is the only superior one in quality and size, as it is one of the finest erect bushes among this family; a vigorous and sturdy grower.

Like its parent, it seems rather more exempt from mould; we have indeed seen no disposition to moulding in any of these seedlings. We urged Mr. Downing to let it be propagated; but, as usual, his modesty is rather in the way of his love of progress and improvement.

Houghton's Seedling Gooseberry.

[Mr. Berckmans has our thanks for introducing the public to a knowledge of this important acquisition. The fact that it is "not yet propagated for sale," might be an argument for withholding it from publication, but this would be to go upon the plan of getting a stock before letting it be known; a mode too often adopted, but which can have no weight with a journal whose sole aim, in such matters, is to impart information. In this respect, the *Horticulturist* may be naturally supposed to differ from a work liable to be swayed by a commercial interest.

Houghton's Seedling Gooseberry has heretofore been considered one of the large (and most prolific) kind, and we therefore give a figure of it to contrast the size with that of Downing's Seedling, which, it will be observed, is of much greater dimensions.—Ed.]

ON THE TREATMENT OF HYACINTHS, WITH REMARKS ON THEIR CULTURE BY THE DUTCH.

BY E. L.

HAVING had some experience in the treatment of this bulb, and a good knowledge of the Dutch system of culture, I forward you a few hasty remarks. The mode in use in Holland has been pretty clearly laid down in a work by St. Simon, published at Amsterdam some years ago, in which everything that can be, and a great deal more than need be, said on the subject is contained; it is now a scarce work, and may not be accessible to many who would otherwise be glad to consult it.

The compost used at Haarlem is rotten cow-dung, decomposed leaves, and fine sand. In making this compost, the Dutch gardeners prefer the softer leaves of elm, lime, and birch, rejecting those of oak, ash, chestnut, or beech, which do not rot so quickly. The cow-dung is from stall-fed cattle, without any mixture of straw or other litter. The sand is procured in the neighborhood of Haarlem, where the soil is a deposit of sea-sand upon a compact layer of hard undecayed timber, the remains of an ancient forest which has been submerged by the sea. The best sand is that procured by digging some depth. St. Simon imagines this sand possesses some peculiar virtue by the admixture of salt, and in this he is probably correct. The leaves are laid in a large heap, in a situation not much exposed to the sun, and not liable to stagnation of water, which is carefully drained from them. When fit for use, the compost is made thus: first they place a layer of sand, next dung, and then leaves, each stratum about eight inches thick, and they are repeated until the heap is about six feet high, a layer of dung being uppermost, sprinkled over with a little sand, to prevent the too powerful action of the sun upon it. After the heap has lain about six months it is mixed, and thrown up afresh, in which state it remains some weeks, to settle, before it is carried to the beds. This compost retains its qualities about six or seven years, but the Dutch avoid setting Hyacinths in it two years successively; in the alternate years they plant Tulips, Jonquils, Narcissuses, Crocuses, Fritillarias, Irises, etc., in the same beds; neither do they plant Hyacinths in the compost the first season, when the fresh manure might be injurious to them. The choice bulbs are taken up every year, and the soil that lay amongst the fibres is then carefully brought up to the surface. The beds should be deep enough to prevent the fibres coming near the subsoil. I believe that English sea-sand will suit the Hyacinth as well as that of Haarlem, and that old tan, if thoroughly decayed and pulverized, may be used instead of leaves, and I know some Dutch gardeners who use it themselves. The cow-dung should be as free from straw as possible, and without the admixture of any other kind, and completely decayed before it is used. The mischief occasioned by the fermentation of half-rotten straw, and the too great heat of horse-dung, etc., is a contagious decay amongst the bulbs, which will spread throughout the bed.

The beds should be made about three feet in depth with the compost, consisting of about one-sixth of rotten leaves or tan, two-sixths of pure sand, and three-sixths of rotten cow-dung. The compost should not be trodden down hard; but, the bed being opened, the bulbs may be ranged, and then carefully covered from three to five inches deep, but not pressed into the compost. If the situation be wet in winter, the beds may be raised six inches, or even more, above the level of the soil, to prevent the evil effects of moisture. The Dutch cover their beds with

dung or tan in winter, which they put on or take off, according to the state of the weather. The compost requires no additional manure till the expiration of about six years, when it should be mixed with fresh sand and dung, as before. When the Hyacinth leaves begin to wither, the bulbs should be taken up, the leaves cut off, and the bulb laid on its side, covering it lightly with the compost, about two inches thick; in this state they should remain about a month, then taken up in dry weather, and exposed to the open air some hours, but not to a powerful sun. They should afterwards be carefully examined, and all the decayed parts removed by a knife. The bulbs should be placed in the store-room, which ought to be airy, about the end of June; they must not be suffered to touch each other, and should be frequently examined, in order to remove those which may show fresh symptoms of decay. They will require keeping in a dry, cool, airy room; if damp westerly winds prevail, the ventilators should be kept closed. Before they are replanted in autumn, they should again be carefully examined, and all decayed parts and withered coats removed.

My experience prompts me to say that those who will take the trouble of following these hints may produce Hyacinth bulbs equal to those imported from Holland.

THE NEW GRENNEL VERMONT GRAPERY.

"There is a man now living (1828) who remembers a circular fruit wall at Shirburne Hospital (Durham), the wall with the fruit trees, and consequently wherein they were planted being movable, so that the trees might be turned to the sun, or removed from an unfavorable wind."

The above we copy from that excellent periodical, *Littell's Living Age*, where it has found room from some of those lurking places which the editor is always successfully rumaging. It notices an old invention, and doubtless a good one for those who can afford to practise it. But our object in copying it is to make it an opportunity for chronicling a newer patent, and one which has at least the semblance at first sight of novelty, and perhaps, of utility. Somebody down east has invented the very most curious grapery! which we should have noticed some weeks ago, but we confess we had some misgivings lest somebody or other should laugh at it or us; the model for the patent fell accidentally under our notice; we made a drawing of it, and, as happens with hundreds of other drawings, we laid it carefully away for something to give us an excuse to display it hereafter; but we are not destined to bring this procrustean grapery into notice, as it has been done for us by an eastern editor.

We submitted the plan to our able correspondent, Mr. Chorlton, good authority on the subject, and have received his reply, which we publish below; but, first, we must briefly say that the plan embraced the training the grape-vines on frames which open and shut like doors, so that when they are all swung they stand parallel to each other, the vines being so planted that when opening and closing they will not be drawn—that is, the lower stem is to be long enough to allow of being stretched. The vines are thus crowded into a small space, and the inventor claims economy in building, &c.

"New Brighton, Staten Island.

"Dear Sir: Your note, including a plan and description of a patented grapery, came to hand to-day. I have examined both very carefully, for I feel much interest in any construction which has the double merit of being practically efficient and cheap. The thing is certainly very ingenious, and, by planting the vines *precisely* as directed, the frames or trellises might be made to open and shut as described; but what of that; there is no advantage to be gained, for the exotic grape-vine would be subject to mildew in nine cases out of

ten, with so much exposure to the air, however much care might be taken to close up in the sudden changes; besides, there is no provision in the principle for any more plants than in the ordinary methods, and as each one has to be trained, first horizontally, and afterwards perpendicularly, there will be two seasons lost at the commencement. As to cheapness, I do not see in what it consists, for even allowing there may be some saving on first erection (which is not the case), there would be a great amount of labor incurred in opening and closing, and, unless this were well attended to on every change of cloud and sunshine, it would be better to have an open trellis outside, and cover with earth in the winter. Improvement and progress is my motto, but I really do not see anything in this but a gimcrack idea, and venture to say that its successful operation is only, so far, in the inventor's brain. He certainly cannot have had much experience, or he would know that a better and quite as cheap a structure can be erected. Such ingenious minds ought to be encouraged notwithstanding their practical defects, for we can sometimes draw an idea from their whims that may be turned to good account; but you may rest assured that this *hanging out* to air process will never do. It would be worth insertion for its novelty, besides its adaptability as a closed green-house in winter, which, with a slight alteration, might have the two ends to open as glass doors. This, with judicious arrangement, might be made a fine feature as a conservatory, but would this infringe upon the patent. By the by, who ever heard before of a patent horticultural structure?

"What could be more economical than using common building spars, cut and fixed double pitch, with wall-plate along the bottom, and posts driven into the ground deep enough below frost; board up one foot in front below the wall-plate, and likewise the two ends; cover this with common frame sashes, and boards running lengthwise hinged to the ridge as ventilators, and you have as cheap a house as can be made. If the vines were laid into wooden boxes, and two boards nailed V fashion, as a cover in the winter time, the sashes could be used for other purposes, thus answering a double purpose.

"Inclosed is the report of the Manchester (England) Botanical and Horticultural Society's last exhibition. I thought you would like to see it. This is my native place, and I have in my possession some 250 prizes, which were awarded to me by the Society.

"WM. CHORLTON.

"To J. Jay Smith, Esq."

LEGENDS OF TREES, NO. 2.

BY WM. H. ALEXANDER.

"The *Mistletoe*, particularly that which grows on the Oak, was held in great veneration by the Britons. At the beginning of their year, the Druids went in solemn procession into the forests, and raised a grass altar at the foot of the finest Oak, on which they inscribed the names of those gods which were considered as the most powerful. After this, the chief Druid, clad in a white garment, ascended the tree, and cropped the Mistletoe with a consecrated pruning-hook, the other Druids receiving it in a pure white cloth, which they held beneath the tree. The Mistletoe was then dipped in water by the principal Druid, and distributed among the people, as a preservative against witchcraft and diseases. If any part of the plant touched the ground, it was considered to be the omen of some dreadful misfortune which was about to fall upon the land. The ceremony was always performed when the moon was six days old, and two white bulls were sacrificed at the conclusion. In Scandinavian mythology, Loke (the evil spirit) is said to have made the arrow with which he wounded Balder (Apollo), the son of Friga (Venus), of mistletoe branches. Balder was charmed against injury from everything which sprang from fire, earth, air, and water; but the Mistletoe, springing from neither, was found to be fatal, and Balder was not restored to the world till by a general effort of the other gods. The magical properties of the Mistletoe are mentioned both by Virgil and Ovid. In the dark ages a similar belief prevailed; and even to the present day, the peasants of Holstein, and some other countries, call the Mistletoe the "spectre's wand," from the supposition, that holding a branch of

Mistletoe will not only enable a man to see ghosts, but to force them to speak to him. The custom of kissing under the Mistletoe at Christmas has been handed down to us by our Saxon ancestors, who, on the restoration of Balder, dedicated the plant to their Venus (Friga), to place it entirely under her control, and to prevent it from being again used against her as an instrument of mischief. In the feudal ages, it was gathered with great solemnity on Christmas eve, and hung up in the great hall with loud shouts and rejoicing.

"'On Christmas eve the bells were rung;
On Christmas eve the mass was sung;
That only night in all the year
Saw the stoled priest the chalice near.
The damsel donned her kirtle sheen;
The hall was dressed with holly green;
Forth to the woods did merry men go,
To gather in the mistletoe.
Then open wide the baron's hall
To vassal, tenant, serf, and all.'

"The *Holly*, like some other evergreens, has long been used at Christmas for ornamenting churches and dwelling houses. It appears to have been first made use of for this purpose by the early Christians at Rome, and was probably adopted for decorating the churches at Christmas, because holly was used in the great festival of the Saturnalia, which occurred about that period. It was customary among the Romans to send boughs of holly, during the Saturnalia, as emblematical of good wishes, with the gifts they presented to their friends at that season; and the holly came thus to be considered as an emblem of peace and good-will. Whatever may have been the origin of the practice of decorating churches and houses with holly, it is of great antiquity. In England, perhaps, the earliest record of the custom is in a carol in praise of holly, written in the time of Henry VI., beginning with the stanza:—

"'Nay, ivy, nay, it shall not be, I wys;
Let holly hafe the maystry,* as the manner is.
Holy stonde *in the halle* fayre to behold;
Ivy stonde *without the door*; she is ful sore a-cold.'

"In illustration of which it must be observed that the ivy, being dedicated to Bacchus, was used as a vintner's sign in winter, and hung outside the door. The disciples of Zoroaster (the author of fire worship) believed that the sun never shadows the Holly-tree; and the followers of that philosopher, who still remain in Persia and India, are said to throw water impregnated with holly bark in the face of a new-born child. In the language of flowers, the holly is the symbol of foresight and caution.

"Our former selection of legends from Loudon's *Aboretum*, concluded with a quotation from an old Christmas carol in praise of holly, assigning to it a chief place in the hall, while ivy is made to stand without door, being 'full sore a-cold.' This suggests, as appropriate to our present gleanings, the mythological allusions to the latter evergreen.

"The *Ivy* was dedicated by the ancients to Bacchus, whose statues are generally found crowned with a wreath of its leaves; and, as the favorite plant of the god of wine, its praises have been sung by almost all poets, whether ancient or modern. Many reasons have been given for the consecration to Bacchus of this plant. Some poets say that it was because the ivy has the effect of dissipating the fumes of wine; others, because it was once his favorite youth, Cissus; and others be-

* Mastery.

cause it is said that the Ivy, if planted in vineyards, will destroy the vines, and that it was thus doing an acceptable service to that plant to tear it up, and wreath it into chaplets and garlands. The most probable, however, seems to be, that the Ivy is found at Nyssa, the reputed birth-place of Bacchus, and in no other part of India. The ancient Greek priests presented a wreath of Ivy to newly-married persons, as a symbol of the closeness of the tie which ought to bind them together; and Ptolemy Philopater, King of Egypt, ordered all the Jews, who would abjure their religion, and attach themselves to the superstitions of his country, to be branded with an Ivy leaf. The Ivy is symbolical of friendship from the closeness of its adherence to the tree on which it has once fixed itself; hence, also, it has become a favorite device for seals, some of the best of which are, a sprig of Ivy with the motto: 'I die where I attach myself;' and a fallen tree still covered with Ivy, with the words: 'Even ruin cannot separate us.'

"The *Jasmine* is no less celebrated for the delicacy of its odor and flowers, than for the pretty love legend connected with its European history. The custom which prevails in some countries, of brides wearing Jasmine flowers in their hair, is said to have arisen from the following circumstance: A grand-duke of Tuscany had, in 1699, a plant of the deliciously-scented jasmine of Goa, which he was so careful of that he would not suffer it to be propagated. His gardener, however, being in love with a peasant girl in the neighborhood, gave her a sprig of this choice plant on her birth day; and he having taught her how to make cuttings, she planted the sprig as a memorial of his affection. It grew rapidly, and every one who saw it, admiring its beauty and sweetness, wished to have a plant of it. These the girl supplied from cuttings, and sold them so well, as to obtain enough money to enable her to marry her lover. The young girls of Tuscany, in remembrance of this adventure, always deck themselves on their wedding-day with a nosegay of Jasmine; and they have a proverb, that 'she who is worthy to wear a nosegay of Jasmine, is as good as a fortune to her husband.'"

THE CRACKING OF THE PEAR.

BY TERRA, NORRISTOWN, PA.

DEAR SIR:—I am a great admirer of your excellent journal, and though but the possessor of what you, perhaps, would call a very small garden, I reap a rich harvest from the field of your pomological and floricultural labors. I am chiefly interested in fruits. Though I have not the great collections I read of in the reports of the chief societies and conventions, I have endeavored to command a select list of good varieties, and derive a great deal of pleasure from their cultivation. My chief interest, however, is for my Pears, on which I have bestowed really a great deal of attention. I think there was nothing induced me to go into Pear culture so enthusiastically as some supremely delicious Butter Pears I once bought in the Philadelphia market, and one of my first purchases consisted of six specimens of that variety. When they commenced to bear, now six years ago, I was surprised to find the fruit all cracked and knotty, and unfit for a hog to eat. I was not then aware how extensively this disease prevailed, but soon learned from some friends, better posted than I was then, and also found that every one had his own special way of accounting for it. Every year since, as they increase in useless and virtue trying productiveness, I have half resolved to dig up and discard them, but have so far continued to hold on in the hope that I might by observation discover a remedy; or learn of some other person's success through

some friendly correspondent of the *Horticulturist*. But I can discover no cause that satisfies me, and I learn nothing from others; I have therefore decided to take out all but one next season, and in the mean time thought I would beg your indulgence to inquire of your correspondents if anything has been discovered in relation to the disease. I have watched them very closely, and invariably notice spots of brown, which under a powerful pocket lens, appear to be fungi, to make their appearance a few weeks before the fruit cracks. It seems as if it destroyed the vital power of the skin wherever it is produced, and as it thus ceases to grow it has no alternative but to crack open as the other parts grow and expand in its vicinity. The experience of the past two seasons seems to confirm this view of the cause. The season before the past was a very dry one; and I think there were fewer cracks than I ever observed before, and some half dozen fruit were perfect; this year being an unusually wet one, the fruit is cracked in every direction, and nearly to the core. Now I suspect that if the skin has been indurated by the fungus I have described, the wet weather being favorable to the swelling of fruit, would necessarily make the cracks deeper than they would be in a dry one. I would like to know whether any of your correspondents have had similar ideas. On the one specimen I propose to save, I intend next season to try the effect of some of the washes of sulphur found so efficacious by grape growers in destroying the vine mildew, which, I think, will test fully whether the disease is or is not caused by a fungus. I fear it will spread to other kinds. I have a young specimen of Passe Colmar which is now in its first bearing year with less than a dozen fruit, and all cracked, though not badly. I never heard of this variety cracking before, and began to be a little alarmed; but a friend tells me that in wet seasons some pears are liable to crack somewhat, especially Winter Nelis, without, however, injuring them to any great degree.

In supposing it possible that a fungus may cause the cracking of the butter pear, I am aware that I am opposing the belief of all the scientific men of our country, whom I think invariably believe that fungi are the consequence and not the cause of the disease; but so far as I have read the history of the vine disease in Europe, I think it is granted there quite generally, that it is caused by a small mould they call *Oidium Tuckeri;* and I cannot help thinking that there appears little disease in the fruit of our Cockspur Hawthorn previous to the attack of the yellow fungus which so disfigures them.

PRACTICE IN RUSTIC WORK.

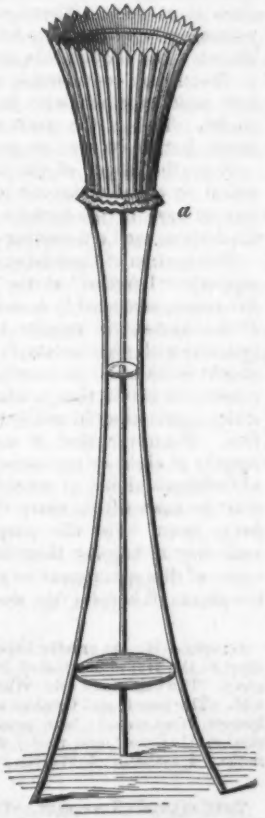
BY AN AMIABLE CONTRIBUTOR.

THERE are some people who must be always cutting, notching, or carving with a knife. Sometimes they seek to perpetuate their precious memory by the formation of certain well-known letters in the bark of a tree, or any other surface which happens to be near. When their hands are not otherwise occupied, almost every bench can testify to the interesting fact that the owner of some name beginning with "A. B.," or "R. W.," once marked the spot with his presence, and left an impression behind him. Others, ambitious to give a touch of art to their productions, are absorbed for many a long hour in developing the head of a monkey, or a dog, on the top of what is highly esteemed as a walking-stick. There is really no limit to the number of juvenile ship carpenters, all more or less distinguished for cutting out their smacks, cutters, schooners, and other merchantmen destined to scale the mountain waves of the nearest ditch.

Let us not frown on these humble efforts, however they make us smile, but rather let us endeavor to give them scope and direction, so that the time and labor which would otherwise be wasted may be profitably and agreeably spent. Rustic work, such as relates to the construction of flower-baskets and flower-stands, is well suited for this purpose, for it includes both cutting and carving.

Those of your readers who have a little taste and spare time, could hardly do better than give it a trial.

In introducing this subject to notice, I send a sketch of one of the simplest flower-stands I have been able to find. It is intended to contain a plant in a pot, and to be placed either in an open corner or behind other plants. The construction of this *single stand* requires but little skill or labor, and the only point which needs particular explanation is that at *a*.



Here there are two different ways of working, in order to produce the projecting bottom. With the first of these two ways, the bottom is formed of two circular boards, the *lower* projecting a little, say about half an inch beyond the margin of the *upper*, and on this latter the lath-like sticks or *ribs* are neatly nailed, after being properly prepared. The other mode is not so convenient, nor so much adapted, but it saves a little wood. It consists simply in carrying a narrow band of wood, or a branch, round the bottom of the ribs after they have been nailed on to the bottom. But before saying more about the construction of the stand, I wish to offer a few observations respecting the

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Common deal board, about half an inch thick, is good enough for the bottom; but it is somewhat difficult to cut a piece of wood evenly round, except with a good saw made for this sort of work, that is, a small, narrow saw, having fine, sharp teeth. It may, therefore, be preferable to have the circular boards prepared by a carpenter, if there happens to be one at hand. Certainly, a handy person may make a shift with a sharp knife or a chisel, but neither is so good as a saw, when it can be obtained. A small brad-awl and some nails of different sizes will also be indispensable.

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some friendly correspondent of the *Horticulturist*. But I can discover no cause that satisfies me, and I learn nothing from others; I have therefore decided to take out all but one next season, and in the mean time thought I would beg your indulgence to inquire of your correspondents if anything has been discovered in relation to the disease. I have watched them very closely, and invariably notice spots of brown, which under a powerful pocket lens, appear to be fungi, to make their appearance a few weeks before the fruit cracks. It seems as if it destroyed the vital power of the skin wherever it is produced, and as it thus ceases to grow it has no alternative but to crack open as the other parts grow and expand in its vicinity. The experience of the past two seasons seems to confirm this view of the cause. The season before the past was a very dry one; and I think there were fewer cracks than I ever observed before, and some half dozen fruit were perfect; this year being an unusually wet one, the fruit is cracked in every direction, and nearly to the core. Now I suspect that if the skin has been indurated by the fungus I have described, the wet weather being favorable to the swelling of fruit, would necessarily make the cracks deeper than they would be in a dry one. I would like to know whether any of your correspondents have had similar ideas. On the one specimen I propose to save, I intend next season to try the effect of some of the washes of sulphur found so efficacious by grape growers in destroying the vine mildew, which, I think, will test fully whether the disease is or is not caused by a fungus. I fear it will spread to other kinds. I have a young specimen of Passe Colmar which is now in its first bearing year with less than a dozen fruit, and all cracked, though not badly. I never heard of this variety cracking before, and began to be a little alarmed; but a friend tells me that in wet seasons some pears are liable to crack somewhat, especially Winter Nelis, without, however, injuring them to any great degree.

In supposing it possible that a fungus may cause the cracking of the butter pear, I am aware that I am opposing the belief of all the scientific men of our country, whom I think invariably believe that fungi are the consequence and not the cause of the disease; but so far as I have read the history of the vine disease in Europe, I think it is granted there quite generally, that it is caused by a small mould they call *Oidium Tuckeri;* and I cannot help thinking that there appears little disease in the fruit of our Cockspur Hawthorn previous to the attack of the yellow fungus which so disfigures them.

PRACTICE IN RUSTIC WORK.

BY AN AMIABLE CONTRIBUTOR.

THERE are some people who must be always cutting, notching, or carving with a knife. Sometimes they seek to perpetuate their precious memory by the formation of certain well-known letters in the bark of a tree, or any other surface which happens to be near. When their hands are not otherwise occupied, almost every bench can testify to the interesting fact that the owner of some name beginning with "A. B.," or "R. W.," once marked the spot with his presence, and left an impression behind him. Others, ambitious to give a touch of art to their productions, are absorbed for many a long hour in developing the head of a monkey, or a dog, on the top of what is highly esteemed as a walking-stick. There is really no limit to the number of juvenile ship carpenters, all more or less distinguished for cutting out their smacks, cutters, schooners, and other merchantmen destined to scale the mountain waves of the nearest ditch.

Let us not frown on these humble efforts, however they make us smile, but rather let us endeavor to give them scope and direction, so that the time and labor which would otherwise be wasted may be profitably and agreeably spent. Rustic work, such as relates to the construction of flower-baskets and flower-stands, is well suited for this purpose, for it includes both cutting and carving.

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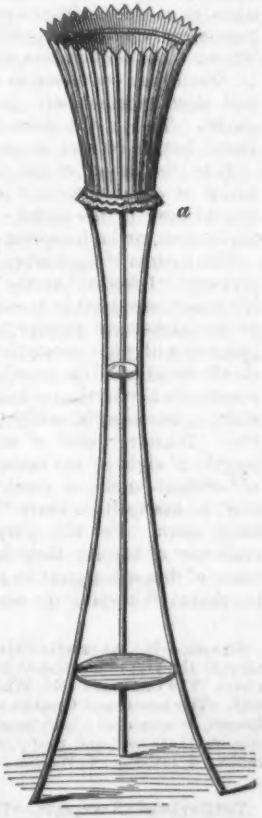

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Begin work by preparing the ribs, cutting them to the same length, tapering them evenly towards the bottom, and pointing them at the end which is to be

uppermost. Keep them as nearly as possible to the same form, and cut the bottom end smooth.

When the ribs are neatly prepared, nail them on to the smaller of the two circular boards which is to form the bottom. If they have been properly prepared they should lie close to one another, and be as near as possible at right angles with the bottom; that is, they should not lie to one side, though sometimes in the process of being put together they may get out of place. It ought to be noticed here, that a ring or hoop, made of an osier twig, is used at the inside near the top, in order to keep the ribs in their places, and it is desirable to introduce it at once. Therefore, nail on two ribs, first of all, at exactly opposite points, and nail the hoop to them. In this way it is much easier to adjust all the others. But though this appears, at first sight, to be a very simple affair, it will be found that considerable care and nicety are required to have the ribs uniform and close together, with just the exact number wanted to fill up the whole all round. This is the point which proves the clever workman in such a form of stand, but, to be sure, so great nicety is not essential to its general appearance.

Now, the larger of the two boards is firmly mounted on the legs, which are nailed at equal distances to hoops, one near the bottom, and another near the top, as seen in the figure. But, instead of a hoop, a board may be placed near the bottom, and a flowering-plant or evergreen can be put on it when wanted.

The bottom of the basket, that is, the larger of the two boards at *a* having been properly "bevelled" at the beginning, is now neatly covered with the scales of Fir cones, arranged in an overlapping manner. Those quite close to the bottom of the basket will require to be shortened a little, and the whole may be either fastened with glue, or small tacks without heads; indeed, the nails in every case should be as small as possible. It is scarcely necessary to add more, for a little practice is better than a volume of directions. There is, however, one point yet which needs especial notice, that is, the process of preparing the branches for the ribs. Whatever kind of wood may be chosen, the branches should be cut into lengths of eight or ten inches, and laid up to dry for some time; if these lengths are without knots, so much the better; and if they cannot be evenly split, they must be sawn with a sharp "ripping saw," but they must be held quite firm while being sawn. For this purpose the hand will not be sufficient, and, therefore, some way of keeping them firm in position must be contrived. The most fertile cause of disappointment in all work of this kind is the want of proper tools, and the means of keeping the work firm and steady.

GRAPES.—We are greatly indebted to Mr. W. N. White, of Athens, Ga., for specimens of most of the grapes mentioned in the lucid and able report of the Georgia Pomological Society. The Chairman (Mr. White) has so fully described these, that he leaves us little to add. The Lenoir and Camaks are quite new; of the latter, there is but one vine, so far as known, in existence; both promise well. The Georgia grapes ripen in the following succession: 1, Lenoir, and nearly with it, 2, Harris and Elsinburgh; 3, Diana, Camaks, Devereaux; 4, Isabella; 5, Warren; 6, Catawba and Scuppernong; 7, Bland and Long.

THE CATAWISSA RASPBERRY.—This fruit comes quite up to its character the present season, having borne profusely, during August, on the new wood. Prof. C. G. Page, of Washington, D. C., says (in Hovey's *Magazine*) what is undoubtedly the fact, that he has realized in it a source of new varieties, and to such an extent, that ere long the Catawissa will be cherished only as a breeder. He adds: "I have now two seedlings of the second generation from the Catawissa, and while the fruit of both is superior to the original, the bearing term is extended far beyond it. We cannot but look upon its introduction as the dawn of a new era in raspberry culture. The varieties are generally more hardy than the Antwerp."

NEW APPLES.*

The Carolina June Apple.—Of this apple, we have had from private growers, more especially at the South, very favorable accounts; and we append the several opinions of well known cultivators at a late Pomological Convention:—

"*Carolina June.*—Mr. Phœnix, of Illinois, observed that it was widely known at the West and South, and was a fine fruit. Mr. Ernst considered it worthy of trial. Mr. Hodge had found it to succeed very well. It was fair, of good quality, and a little later than the Early Harvest. Dr. Brincklé had seen it the past season, and considered it very fine, and worthy of cultivation. Mr. Downing did not think it nearly so fine as the Early Harvest, and it was, with him, two weeks later in ripening. Mr. Negus, of Iowa, observed that it kept through the months of August and September, and was more handsome and salable than any other variety in his vicinity. Recommended as promising well."

In the Southwest, the Carolina June appears to be really earlier than Early Harvest; but it has not so proved in New York, and other places at the North, where it is from one to two weeks later, and its flavor not so good as at the South. This is, no doubt, the effect of climate, the South suiting Carolina June better than the Early Harvest, and *vice versa*.

Meaverack's Sweet, or Maverick Sweet.—This description we take from White's *Gardening for the South:* "Very large, roundish, irregular, sometimes slightly conical, striped with bright red, sprinkled with greenish flecks. Stem, short, in a rather large, regular cavity. Calyx, open. Basin, medium. Skin, rather thick. Flesh, fine grained, tender, of sweet, excellent flavor. Ripens, November and December." Mr. White is a pomologist to be depended on; he furnishes us, this month, with the *ad interim* Report of the Committee of the Pomological Society of Georgia, to which we refer with great satisfaction.

POIRE PECHE (ESPEREN).

We have been favored with specimens of this Pear by M. de Jonghe, of Brussels. The variety was raised from seed by Major Espéren in 1835 or 1836, and bore for the first time in 1845. The accompanying figure represents the form of the fruit. Skin, greenish-yellow. The flesh is yellowish-white, very melting, with abundance of rich, sugary, refreshing juice. In ordinary seasons, its period of maturity in this country will probably be near the end of August. The tree is vigorous, productive, and grafted trees soon come into bearing. The shoots are of a clear yellowish color, like those of the Passe Colmar; the leaves ovate, slightly acuminate.

Many of the early pears now in cultivation are dry and musky, and, on the whole, so worthless, that the trees ought to be destroyed, and replaced by superior kinds, of which one may be the Poire Pêche. It is hardy, and bears well as a standard.—*London Gardeners' Chronicle.*

* See Frontispiece.

CULTIVATION OF THE CALCEOLARIA.

The cultivation of the Calceolaria from the seed, requires a little extra care in the early state of its culture. To insure success in the raising of seedlings, it is requisite to attend to the following directions as early as possible. The seed should be sown in pots, prepared in the following manner: The pot to be half-filled with drainage, over that rough siftings of the mould, and the surface covered with soil as fine as possible, half of which should be composed of silver sand. When prepared thus, it should be watered with a fine rose, immediately after which sow the seed carefully, without any covering of soil. The pots should then be placed under a close frame or hand-glass, in a shady part of the garden, no artificial heat being required. In large establishments, of course, they may have propagating or other houses that will do, where the same kind of moist temperature could be obtained; but any exposure to the sun must be carefully guarded against by mats or paper. If the situation is of proper temperature, they will require watering very seldom. Directly the seedlings are strong enough, they must be pricked off in pots prepared as before, and placed in the same situation; from the store pots they will require to be potted off singly; after this the plants will grow very rapidly. Through the winter, the plants thrive well on the shelves, near the glass, in the greenhouses; and to obtain fine specimens, they must be shifted on freely till the flower-stalks have started, and should always be smoked with tobacco directly the green fly appears, as no plants in cultivation so readily suffer from this insect as the Calceolaria.

It is necessary to remark, that one of the most frequent causes of the appearance of these injurious insects, is the plant becoming *root-bound;* to avoid which evil, it is important that it should frequently be repotted during the growing season.

These remarks will apply also to the cultivation of the Cineraria, except that this plant is more hardy, and will thrive with less care.

ON THE SOIL MOST SUITABLE FOR GROWING THE RHODODENDRON. BY J. W.—Nothing suits the Rhododendron so well as good fibrous peat from an old common. The best specimens are planted in nothing else. The peat, in order to suit the Rhododendron, should have plenty of fibre in it, so that it may be taken up in large turfs without falling to pieces; in this they will be found to flourish amazingly. The beds may be five feet wide, and should have the soil thrown out about eighteen inches in depth, and the space filled up, and a few inches more added at top, with such fibrous peat chopped up small. If the soil where the beds are formed be stiff or clayey, drainage had better be provided for, as stagnant water is the greatest injury to this shrub than can exist. That they grow sometimes in boggy places in their *native* climate I am aware, and that even the swamps are dry for some distance from the surface in hot weather. The Rhododendron, however, requires a liberal supply of water when the sun has much power, as few shrubs suffer so much from drought; if we have the means of flooding the beds at such times, nothing can be better.

For pot culture, a little difference may be made in the soil by the addition of one-third loam from a rich pasture with the peat; this, well amalgamated together, and rubbed through a coarse sieve, answers well, although a little cow-dung, thoroughly decomposed, is strongly recommended by a friend who has grown this shrub in pots with decided success. With such soil for plants either in beds or pots, there is no difficulty in growing or flowering Rhododendrons in the greatest perfection.

EDITORS TABLE.

The Times.—If anything were wanting to place the employments of country life in strong and favorable contrast with those of our great cities, it has been the crash of stocks, and pecuniary losses in the latter, since our last issue. We then recorded the general appearance of smiling faces among the country-dwellers; in a few days, all smiles faded from the cheeks of the city. Broken speculators, broken banks, broken *trusts*, merchants, manufacturers, railroads, and other corporations, were tripped up by events as unexpected as the tornado and hurricane. Country folks continue to exhibit countenances unsullied by anxiety, because they have kept within their legitimate business, and have not permitted body and soul to be absorbed in growing suddenly rich. The contrast is instructive: while the speculators' coffers are dried up, the farmer and gardener has his barns and his cellars teeming with the produce of his land, and has no one to make him afraid. Let the people take warning, and learn that the non-producer who endeavors to live without the labor to which man is doomed, is, in the end, the unhappy being now so often met with in streets and exchanges, borrowing money—his independence destroyed, and all but overwhelmed with a sense of his obligations to others.

The Rural World.—A specimen number of the *Rural World* will be issued about the first of December. Of this number 30,000 copies will be published, to which the attention of advertisers is requested. Its price will be one dollar a year. Address the publisher of the Horticulturist.

The Agricultural Exhibition at Louisville.—We have watched the proceedings of this Society with great interest, from day to day, as the papers brought the detail of its important events. Col. Wilder was, as usual, very happy in his speeches and his actions, giving spirit to the whole programme. For the details, we must refer to the published accounts, only remarking that the floral hall and pomological portions of the exhibition, appear to have excited universal approbation. The whole affair has marked an era of good feeling, and has been productive of so much emulation as to have inaugurated a new order of progress in the West. Who shall say as to what great ends this jubilee in the great valley may lead? When looking forward to the enlargement of the area of agriculture in that vast region, it is difficult to form correct ideas as to the importance it will attain. Situated between the extreme North and the extreme of the South, with steam to transport its products, and to receive returns to suit the wants of its inhabitants, the valley of the Ohio has a destiny—peopled as it is with intelligent men and women—which it would be dangerous to foreshadow, even in prophecy. The populousness of the valley of the Nile will have been its only counterpart; but, unlike that once happy region, our great valley has the blessings of Christianity and education, and, in the possession of these greatest blessings, is destined to prosper beyond the dreams of the most sanguine.

Keeping Grapes.—Dr. E. Liffingwell, of Aurora, N. Y., assures us that both himself and a neighbor have no more difficulty in keeping grapes than apples. Gather them carefully on

a dry day, remove all unsound or unripe berries, and pack them in small, shallow boxes, with paper on the bottom and between the layers; set them in a cool, dry place for ten days, when they will have passed the sweating process, and *then* close them tight, and keep them at a low temperature, without freezing. A dry cellar will answer. Dr. L. promises us the results of his experiments with sorghum, which we hope to receive. We are prepared to hear of many successes.

Rebecca Grape.—Mr. Brocksbank advertises, this month, the Rebecca Grape at reduced prices. Mr. Charles Downing says of the Rebecca: "Flesh of some consistence, juicy, sweet, and delicious, with a perceptible native perfume, but very agreeable. It has no toughness or acidity in its pulp, and ripens eight or ten days earlier than Isabella, and keeping a long time after it is gathered. This superior white grape is undoubtedly hardy. It is not so vigorous in its habit as Isabella and Catawba, and not disposed to mildew, and being exceedingly beautiful as well as excellent, it must be regarded as a very great acquisition."

Beautiful Illustration.—The President of the British Association, at the late meeting in Dublin, introduced the following extraordinarily beautiful illustration: "* * In order that the *date palm* should ripen its fruit, the mean temperature of the place must exceed 70° Fahrenheit; and, on the other hand, the *vine* cannot be cultivated successfully when the temperature is 72°, or upwards. Hence the mean temperature of any one place at which these two plants flourished and bore fruit, lie between these narrow limits—*i. e.*, could not differ from 71° Fahr. by more than a single degree. Now, from the Bible, we learn that both plants were *simultaneously* cultivated in the central valleys of Palestine, in the time of Moses; and its then temperature is thus definitely determined. It is the same at the present time; so that the mean temperature of this portion of the globe has not sensibly altered in the course of thirty-three centuries!"

Three New Books, of much interest to our readers, have been just published. Lorin Blodget's *Climatology of the United States*, admirably produced from the press of Lippincott & Co., of Philadelphia, will command the attention of the student no less than of the general reader. Statistics have prepared the way for this book, and Mr. Blodget seems to have been the right man to step in and tell us the results. Our pages, hereafter, will benefit by the work. It is a large octavo, of 534 pages, for four dollars.

Downing's *Fruits and Fruit-Trees of America*, revised and corrected by Charles Downing, has at last been published by Wiley and Halsted, New York. It is much enlarged, containing 755 pages, and we need scarcely say that it clears up many confused points with as great accuracy as was possible from the combined information of our best pomologists; introduces the new fruits cautiously and carefully; and is altogether the *vade mecum* of this country—indispensable to the fruit grower, and invaluable to the amateur. So far as we have examined the work, it is eminently satisfactory. The modesty of the reviser is a beautiful feature, and when we consider the amount of labor it has involved, and that for no selfish ends (the proceeds of the copyright being the property of the relict of the late A. J. Downing), no one can look upon the book without a feeling of admiration, and its purchase as a double pleasure. We regret that the index, on which great care appears to have been exercised, is yet somewhat imperfect. For instance, after examining there for the *Lenoir*, *Long*, *Devereux*, and *Thurmond* Grapes, and not finding any reference to them, we discover, at page 340, the following in the text:—

"*Lenoir, Long, Devereux, and Thurmond.*—Under the above names, grapes much resembling, in character, Herbemont, are grown in the Southern States, and we have hitherto

considered them synonymous of it; but all our Southern friends claim that Lenoir is a distinct variety, and much earlier than any of the others, and also, at least, that some of the others are distinct. The matter is now under investigation, and we must wait the result before deciding." By a curious coincidence, the *ad interim* Report from Georgia, and Mr. Downing's book, reached our table on the same day.

McMahon's Gardening.—The eleventh edition of McMahon's large octavo on *American Gardening*, illustrated, and with additions and alterations, to bring it up to the day, has been published by Lippincott & Co., of Philadelphia. It has had the careful examination of a practical gardener well known to the American public.

Patent Office Reports for 1856, 3 vols.

Sorgho and Imphee, the Chinese and African sugar-canes. By Henry S. Olcott. Illustrated. New York: A. O. Moore, 1857. The whole story is here ably told.

PART IV. of Dr. Hooker's *Flora of Tasmania* (4to., Reeve) has been published. It contains the Van Dieman's Land orders from Ericeæ to Proteaceæ, reaching the 320th page and 80th plate. No fewer than forty species of Epacrids are described, among which is a new genus, Archeria; Tasmania thus produces about one-eighth of the whole order.

MICHIGAN AGRICULTURAL TRANSACTIONS.—Mr. J. C. Holmes, the Secretary, will please accept our sincere thanks for a complete set of the Michigan Agricultural Transactions, which contain much of great value, and shall receive an examination soon. The volumes increase in bulk yearly, like a youth who is growing to manhood; should they go on growing, they will soon be giants. We would suggest to all public libraries the propriety and utility of collecting these State publications, which will transmit to posterity a history of our doings, better, perhaps, than any other species of printed books. They will be examined by antiquaries and commented on by our successors with eager interest; the improvements noted, and our—to them—odd beginnings will be a fruitful source of amusement sometimes.

GOSSIP.—What is the source of the vegetable matter conveyed to sterile soils, except the minute portion contained in the seeds wafted thither by winds or waves? a vast quantity has been produced, and is represented not only by the existing vegetation, but by the rich mould imparted to the soil by the decay of previous generations. The necessary materials exist in the air; plants possess the peculiar faculty of drawing them from the air; the air must have furnished the whole. If a bean be germinated on pounded flints or glass, and has attained all the development it is capable of under such circumstances, it will be found to weigh many times as much as the seed from which it sprang; a small portion only could be derived from the flints or glass; let its ashes, therefore, be deducted, and its carbon alone be taken into account. This element—which may have increased fifty or a hundred fold—can have been derived only from the carbonic acid brought to the plant by the rain-water and the air. Vegetable mould increases with the age of the forest, and the trees must draw from the air not only the carbon which their trunks contain, but the additional quantity which they impart to the soil in the annual fall of leaves.——A good writer in *Blackwood*, alluding to the paradox of the love of darkness manifested by some of the marine animals who congregate in caves or under rocks, says: "Let us be ignorant! Let us acquiesce in mysteries (when we cannot penetrate them), nor vex with noisy questionings the imperturbable reserve of nature, remembering the words of the poet, that 'fools rush in where' gentlemen acquainted with zoology 'fear to tread.'" Describing the *Brittle Star*, he says: "You would never imagine how sensitive he is to an insult. Place but a finger on him, and he breaks up his dishonored body into fragments before your eyes. He thinks no more

of throwing away his legs and arms than a young lord in London thinks of squandering his acres. Professor Forbes was ready to receive one with his bucket, and a gorgeous specimen came up. Whether the cold water was too much for him, or the sight of the bucket too terrific, in a moment he proceeded to dissolve his corporation, and in every mesh of the dredge his fragments were seen escaping. In despair, he grasped at the largest, and brought up the extremity of an arm with its terminating eye, the spinous eyelid of which opened and closed with something extremely like a wink of derision."——A correspondent of a London journal says: "You appear to think it likely that sulphur will be found a cure for the potato disease. I think the fact that the murrain does not attack potatoes grown in the Swansea copper smoke, much strengthens that opinion; for the copper smoke contains a large quantity of sulphur, although it contains other materials. Land at Swansea, near the copper works, which was formerly barren and useless, now lets, I am informed, at £8 per acre, for the purpose of growing potatoes. I know that the ground in the neighborhood of the copper smoke is much valued for the purpose of growing potatoes, and that large quantities are cultivated there."——In reference to an article in a late number, a friend remarks: "It may not be uninteresting to observe that, in cases of famine, the roots (rhizomes) of ferns have, in former times, been employed for food. In the *English Chronicle* for 1377 to 1461, published by the Camden Society in 1855, I find the following passage (p. 55): 'And the nexte yeer aftir, the xii yeer of Kyng Harri, was the grete frost,' &c. * * * 'And the nexte yeer aftir began the grete derthe of corn in this land, the whiche endurid ii yeer, so that a bushelle of whete was sold for xl*d.*, and the poer peple in dyvers partiez of the North cuntre eet breed maad of farn rotes."—*Thomas Bell, the Wakes, Selborne.*——Almost all the stinging hairs of plants end in a little knob-shaped swelling, which is exceedingly brittle, and easily knocked off by a touch. The opened point, on being pressed against, exudes the secretions contained in the cells, and these are often poisonous. The most dangerous of all is the *Urtica urentissima*, called Devil's Leaf. The wounds of this plant give pain for years after, especially in damp weather, and occasionally death from lock-jaw is the result. Could this poison be separated and collected, it would be the most powerful vegetable poison known.——The hyena-dog, from the South of Africa, is attracting attention abroad. There is no mane as in the hyenas, and the tail resembles that of some dogs; the head is hyena-like, and it has only four toes to each foot. Its color is reddish or yellowish-brown, variously mottled. It is swift, fierce, and active, and hunts in packs, at night by preference, but frequently in the day.——Anglers employ an infusion of the leaves or husks of English walnuts for pouring upon the earth, in order to procure worms, which it is said to bring speedily to the surface.——The receipts at the Crystal Palace, Sydenham, are stated to be so insufficient that the Directors have been driven to the expedient of proposing to raise the large sum of twelve hundred and fifty thousand dollars—a measure which only extreme necessity could justify. It is proposed to convert it into a grand picnic establishment; alas!——The process by which blood manure is made: Mix about two portions of bones, two of blood, and one of sulphuric acid together, and the result is a blood manure. Calcined bones are more easily acted on by the acid than fresh ones, and are therefore better for the purpose. The blood and bones are mixed together first, and then the acid is added.——What is the handsomest flowering hardy shrub for July? is answered by the *Gardeners' Chronicle*, by naming the Spiræ callosa, thus described: A shrub about four feet high, and as much in diameter, most gracefully branching from the ground; slender shoots of a dull red, and simple leaves of a quiet green, such as the most fastidious artist would select for a contrast with brighter colors. Then let every branch burst out its spreading twigs loaded with tiny flowers, arranged like those of a Laurustinus, but more loosely; the youngest dull red, and as large as a pin; others, more grown, with a vivid crimson centre when the gay petals are preparing to burst their dingy calyx, and

looking like rubies in a rusty setting. More mature, the crimson petals begin to spread, and reveal their still more rosy centres; and at last the ring of crimson stamens gradually unfolds, and forms a glowing halo round the centre. This description is as accurate as beautiful.——The clove is the unexpanded flower-bud of the *Caryophyllus aromaticus*, and has been known in commerce for two thousand years. The plant is a native of the Moluccas, and other islands in the Chinese seas. A fine tree has been known to yield one hundred and twenty-five pounds of this spice in a season; and as five thousand cloves only weigh one pound, there must at least have been six hundred and twenty-five thousand flowers upon this single tree.——The Elder has been supposed by some to be the tree on which Judas hanged himself. According to others, it was a fig-tree.——It was formerly believed, in Scotland, that the dwarf birch is stunted in growth, because the rods were formed of it with which Christ was scourged.——In Holland, there are many orange-trees which have been in the same family two hundred and three hundred years; one, at Versailles, has the inscription, "Planted in 1421;" one at Rome, in the Convent of St. Sabina, is said to have been planted by St. Dominic in 1200.——A gum-tree in Tasmania is stated to be two hundred and fifty feet high, with a diameter of thirty feet. This is reputed to be the oldest tree in the world.——Some persons have kept toads for pets. Dr. Townson kept one he called "Musidora," to guard his dessert from flies.——Dogs in a state of nature, it is said, never bark; their barking is an acquired habit—an effort to speak, which he derives from his association with man. Columbus found the dogs which he had previously taken to America, had lost their propensity to barking.——Scale and red spider may be destroyed by the following solution: Four ounces of quick-lime, and the same quantity of flowers of sulphur, boiled for a quarter of an hour in a gallon of water. This, when decanted, forms a clear, amber-colored solution; a single application to scale only is necessary, using a brush, and would require probably but a small admixture of water, if any. In the case of red spider, the solution, somewhat weakened, must be applied with a garden syringe, care being taken to reach the under part of the leaves as much as possible. It would discolor the paint of the house.

The Advent of Man upon the Earth.—The following passage from Hugh Miller's *Testimony of the Rocks*, is full of thought and truth: "Not until the introduction of man upon earth, do we find a creature whose works sensibly affect and modify the aspects of nature. But when man appears, how mighty the change which he effects! Immediately on his creation, he takes under his care the vegetable productions of use and show: it becomes his business to keep and dress a garden. He next becomes a tiller of fields; then a planter of vineyards. Here he cuts down great forests; there he rears extensive woods. He makes himself places of habitation; and busy cities spring up as the trophies of his diligence and skill. His labors, as they grow upon the waste, affect the appearance of vast continents, until, at length, from many a hill-top and tall spire, scarce a rood of ground can be seen on which he has not built, or sown, or planted, or around which he has not erected his walls or reared his hedges. Man, in this great department of industry, is what none of his predecessors upon the earth ever were: 'a fellow-worker' with the Creator. He is a mighty *improver* of creation. We recognize that as improvement which adapts nature more thoroughly to man's own necessities and wants, and renders it more pleasing both to his sense of the æsthetic and to his more material senses also. He adds to the beauty of the flowers which he takes under his charge—to the delicacy and fertility of the fruits; the seeds of the wild grasses become corn beneath his care; the green herbs grow great of root or bulb, or bulky and succulent of top and leaf; the wild produce of nature *sports* under his hand; the rose and lily broaden their disks and multiply their petals; the harsh green crab swells out into a delicious golden-rinded apple, streaked with crimson; the productions of his

kitchen garden, strangely metamorphosed to serve the uses of his table, bear forms unknown to nature; an occult law of change and development inherent to these organisms, meets in him with the developing instinct and ability, and they are regenerated under his surveillance. Nor is his influence over many of the animals less marked. The habits which he imparts to the parents become *nature*, in his behalf, in their offspring. The dog acquires, under his tutelage, the virtues of fidelity to a master, and affection to a friend. The ox and horse learn to assist him in the labors of the fields. The udders of the cow and goat distend beneath his care far beyond the size necessary in the wild state, and supply him with rich milk, and the other various products of the dairy. The fleece of the sheep becomes finer of texture and longer of fibre in his pens and folds; and even the indocile silkworm spins, in his sheltered conservatories, and among the mulberry-trees which he has planted, a larger, and brighter, and more glistening cocoon. Man is the great creature-worker of the world—its one created being, that, taking up the work of the adorable Creator, carries it on to higher results and nobler developments, and finds a field for his persevering ingenuity and skill in every province in which his Maker had expatiated before him. He is evidently—to adopt and modify the remark of Oken—God's image 'manifest in the flesh.'"

THE FRENCH GARDENERS.—These industrious gardeners, especially around Paris, pursue a simple plan, which they find advantageous, paying attention to a few special plants for which there is a regular demand. The plan will prevail here as we arrive at a more extended population. Division of labor follows high civilization, as we see in our stores and shops. Formerly, when cities contained but a few inhabitants, the store contained dry-goods, hardware, and groceries, with a large sprinkling of nick-nacks, and perhaps an ox or goose-yoke or two. Now the cloth or silk merchant disdains to sell knives, and the hardware merchant would know about as much of the quality of silks as the butcher. This plan of having *specialties* has many advantages, not the least among which is the perfection that may be obtained by studying and practising a particular line of business.

The French gardeners, in the faubourgs around Paris, possess from a quarter to one acre, where everything is done on the most economical plan. To save expense in heating, &c., the plant-houses are built two, three, or four feet below the surface, exactly like span-roofed pits; the front or south lights are glass, and the back is simply constructed; in this country it may be of very common boards, with an interspace filled with tan or covered over thickly with leaves in winter. No other means of warming is employed. Such structures are quite common in Burlington, N. J.—so much so as to make it quite noted—and in these fine plants are bloomed, and lemon and lime-trees fruited in great perfection.

Each French gardener grows only ten or fifteen kinds of plants, to bloom in succession, that his energies may be concentrated upon one thing at a time, and thus what is done is done well. One will attend only to camellias, azaleas, roses, orange-trees, and hard-wooded plants; another, to ericas, epacris, pelargoniums, &c.; another to violets, pansies, carnations, &c. All who have been in Paris, in the season, will remember the exquisite perfection of the moss-rose buds and flowers sold in the shops and streets; these form one specialty, and the earliest come from such houses as we have described. It is no uncommon thing to find in one of these little gardens 10,000 or 15,000 camellias, and in another as many roses or crassulas. From such spots issue the bouquets so exquisitely grouped, and with such harmony of colors, that the work assumes the character of a fine art; it is, in fact, the result of study assisted by practice, by a people who, of all others, have the best taste for colors.

These hints are thrown out for imitation, and are from notes on the spot.

THE Hybrid Lucombe oak, having now attained sufficient age to be felled, is pronounced to possess more valuable wood than the best English oak, being heavier and stronger.

CATALOGUES, ETC., RECEIVED.—Regulations and List of Premiums of the Seventh Annual Wisconsin State Fair, 1857, to be held at Janesville. This came too late for notice last month, and before this reaches our Wisconsin readers, the fair will be almost or quite over.

Descriptive Catalogue of Strawberries, comprising the collection of W. R. Prince & Co., Flushing, L. I.

W. R. Prince's address to the American Institute on the Chinese Potato—Dioscorea Batatas. If this esculent has the great value in this country, attributed to it by the French reports, it is time we had efficient specimens in plenty. Thus far we have been unsuccessful in propagating it to any extent.

Annual Catalogue of Grape-vines, for sale at the Vinwood Grape Nurseries, Ilion, Herkimer County, N. Y., J. D. Ingersoll, proprietor, 1857, 1858. This list embraces all the esteemed varieties, at moderate prices.

Wholesale Catalogue for Autumn of 1857. Du Page County Nurseries, Napierville, Illinois, Lewis Ellsworth & Co., proprietors. This comprises a large and valuable stock, to which it affords us pleasure to call attention.

Complete Set of the Transactions of the Michigan Agricultural Society, commencing in 1851. Most portly and interesting additions to our library shelves.

Descriptive Catalogue of Fruit and Ornamental Trees, &c., for sale by W. T. & E. Smith, Geneva, N. Y. This is a carefully prepared and valuable catalogue, embracing a great variety of the best stock.

W. R. Prince's Select Catalogue of Bulbous Roots. Ditto. Descriptive Catalogue of Strawberries, 1857–8.

BULBOUS ROOTS.—Mr. A. Bridgeman, of New York, advertises a large stock of bulbous roots, including a number not generally kept for sale. His catalogue may be had on application to 876 Broadway.

J. M. Thorburn & Co.'s Descriptive Annual Catalogue (1857) of Bulbous Flowering Roots, with Directions: No. 15 John Street, New York. A grand collection, indeed.

New York Horticultural Society's Schedule of Premiums for the Exhibition, which closes to-day, October 1. This came too late for notice in last number, and of course, from the date, we have to regret that the present issue contains no account of the doings transpiring while our number is sailing about through all the post-offices of the land.

Descriptive Catalogue of Fruit and Ornamental Trees, Shrubs, and Plants, cultivated and for sale at the Marshall Nursery; Manly & Lowe, Marshall, Clark County, Illinois. It is very pleasing to see such extensive lists from the interior. We are making a curious collection of all the catalogues of the country, for binding and preservation in a public library, and shall be pleased to receive all that are published.

Wholesale Priced List of Trees and Shrubs. Nursery of G. W. Strong, Nonantum Hill, Brighton, five and a half miles from Boston. For the fall of 1857. Apparently a well selected stock, and certainly not unreasonable.

MR. PEABODY has been awarded a gold medal, of the value of fifty dollars, by the Alabama State Agricultural Society, "as a testimony of their high appreciation of his success in the propagation of his seedling Hautbois, and bringing the culture of the strawberry to such perfection."

A VALUED correspondent writes thus: "It belongs to the mission of the *Horticulturist*, as I understand it, to teach Americans that the highest beauty and the highest utility are inseparable. Its influence illustrates the hidden sense of the old myth that the goddess of beauty was wedded to Vulcan, the god of practical ingenuity. It has already accomplished so much in this direction that, to me, a journey by steamboat or railroad is like *turning*

over the leaves of one of my bound volumes of this 'Journal of Rural Art and Rural Taste.' On every hillside are seen unmistakable embodiments of ideas and suggestions put forth by it. Attractive and convenient homes are rapidly supplanting architectural caricatures; vineyards and orchards are thriving where burdocks and thickets once deformed the fields. As faithful bishop of a large horticultural diocese, you will some time, I trust, be present at a meeting of our 'Rural Art Society,' now cutting its wisdom teeth in garden craft, the suggestion for which comes, I think, from your work."

MANAGING LILACS, ROSES, AND HONEYSUCKLES.—A writer in the *Gardeners' Chronicle* says: "If taste and a knowledge of colors are observable in the distribution of the plants in the flower borders, we may also perceive a certain degree of skill in the peculiar method practised in France of pruning and managing the Persian lilacs and the few other shrubs that are cultivated. The roses and honeysuckles are annually headed back and pruned very close to the stem. The lilacs are nice bushy half standards, having their branches so thinned and regulated that none either cross or interfere with each other, nor extend beyond a certain distance from the stem. In the winter pruning, all the young twigs are removed except the one at the end of the branch that is left for flowering, and towards the end of April and beginning of May, they have a splendid appearance. Immediately the flowers decay, the twigs that bore them are pruned back, and the branch made to send out a fresh shoot for flowering the following season; by this mode of treatment the bunches of flowers, although by no means so numerous, are very much larger and finer than any we are accustomed to see."

FLOWER POTS.—The two conservatory flower pots here figured, are from a German manufactory (that of Edward Saelzer), and must be admitted to be in fine taste; they are ornamented, with wreaths painted in gay colors, and are altogether superior, both in quality of material and in their ornamentation, to most that are imported from abroad. The pattern

CONSERVATORY FLOWER POTS.

could be advantageously adopted in a more simple material. We do not despair, when horticultural societies adopt premiums for such things in their schedules, of having manufactured in America patterns that one can bring into a parlor; to this end, good models are needed.

FRUIT.—Mr. Isaac B. Baxter, long a valuable member and successful exhibitor at the Pennsylvania Horticultural Society, laid on our table early in September very fine specimens of the following pears: Golden Beurré of Bilboa, Washington, and Julienne, with

some plums; the Reine Claude were especially delicious, and the whole highly creditable to the grower's skill. The beautiful little Washington pear is an especial favorite, excellent and highly ornamental when ripe.

Effect of the Stock upon the Graft.—I have a word to say in relation to the effect of the stock upon the graft.

About thirty years since, my father grafted two apple-trees of some size, with scions taken from the same tree, and of the same variety (Little Core). The trees stood on precisely similar soil, and within a few rods of each other; but the original fruit on one was sweet and dry, while the other produced juicy and quite acid fruit. The produce of the graft exhibited a marked difference in form, flavor, and color; the sweet stock yielding fruit more marked with red, drier, less acid and firmer in texture than the other.

One of the trees is now dead, or I would send you a specimen of fruit from both. I am not able now to refer to the query mentioned by Mr. Huling, but it is a common remark, that "there are two kinds of Greenings," and there is really so much difference in the Rhode Island Greening on different trees in this vicinity, that I am not surprised at the general belief in two varieties, and I am not able to *prove* that it is not correct, yet I am convinced, by several years' observation of all the facts within reach, that the difference is wholly due to the effect of the stock upon the graft, and that this variation has been continued and increased, as suggested by Mr. H., until, in some cases, the fruit would hardly be recognized.

In conclusion I have a question to propose. If scions of a fine buttery pear were grafted on a stock of opposite character, and this regrafted with a third, which of the first two would produce most effect on the last? Yours truly, Wm. F. Basset, *Ashfield, Mass.*

The Great Conservatory of the London Horticultural Society's gardens is about to be devoted to the growth of grape-vines. For these a border four feet wide has been made all round the outside of the house. It is bottomed with brickbats, over which are laid nine inches in depth of rough gravel for drainage, over that again are laid turfs broken a little with the grassy side downwards, and on these is put the soil in which the vines are to be planted. This consists of good sound loam mixed with burned turf which has been well soaked with liquid manure. Mr. M'Ewen is of opinion that vine borders should never be made wider than four feet at first. His plan is to widen them in proportion to the growth of the vines, and the outward extension of their roots. The latter have thus fresh soil applied to them at a time when they most require it, whereas if the border was made its full width at once, the soil on that side of it furthest from the house would be comparatively worthless for the support of the vines long before the roots had reached it. The advantage of making borders piecemeal will therefore be apparent.

The *Berberis Dulcis*, sweet Barberry, is thus alluded to by Dr. Lindley:—

We have to thank the kindness of a New Hampshire correspondent, "A. W.," for some fine specimens of the fruit of *Berberis Dulcis*, a hardy evergreen shrub that bears profusely near Shirley. The branches are loaded with berries of the deepest purple, many of which are fully half an inch in diameter. When quite ripe they are said richly to deserve the name the species bears, but it is difficult to prevent birds carrying them off before their sweetness is formed. Berries of *Berberis Darwinii* accompanied them, but we fear that no time or sunshine will convert their acid into sugar. In the meanwhile, *Berberis Dulcis* may now be fairly placed among the smaller table fruits, along with currants, gooseberries, and their allies.

KEEPING LATE PEARS in large glass jars answers a good purpose. When the pears are gathered from the trees they are laid in the fruit-room for a week or ten days until they are quite dry. Each pear is then wrapped in paper and placed in the jars. When there is not sufficient fruit of one sort to fill a jar, then a late kind is put at the bottom and an earlier sort at top; when the jars are filled, they are stopped up and sealed; the name of the sort or sorts is written on a label, which is fastened to the handle. They are then all placed in the fruit-room, where they remain until used. Late kinds kept in this way, when used in March and April, were most excellent.

ALBANY SEEDLING.—Mr. John Wilson, of Albany, N. Y., will accept our thanks for fine plants of the Albany Seedling Strawberry, to give an opportunity of testing its merits, which we shall do.

VINE DISEASE.—In Mr. Buchanan's valuable "Calendar" of last month, he gave a melancholy account of the loss of the crop of grapes at Cincinnati; the news from Portugal is also unfavorable.

ANSWERS TO CORRESPONDENTS.—CEMETERIES.—"In a cemetery in the country, where the population is limited, and where it will be necessary to depend mainly on beautifying and improving the natural advantages of the grounds, and not on extensive inclosures and monuments," it will be well, in the first place, to remove all unsightly trees and objects of every kind; to make only the necessary walks, as future expense will be thus avoided, and to plant such trees in variety as will permanently adorn the place, and be suited to the climate; the greater the variety, provided they are properly chosen, the better. Neatness and cleanliness follow as a matter of course; select a superintendent who has a good eye to order, and who possesses some knowledge of trees; if he has not this requisite, he must be overlooked by a president or manager who has.

"The best mode of inclosing the outward boundaries" will be found to be stone, and it will be the cheapest in the end. It may be either a dry wall, or made with ordinary mortar; where it supports a bank of earth it should be laid on a deep foundation, and be made amply thick; such banks are constantly pressing outwards, and this process is assisted by the alternate freezing and thawing.

"Indicating single lots without inclosing with a fence, railing, or hedge," may be simply effected by placing a square marble block at one or two corners of each lot with the name or number carved on the top. This block need not project more than an inch or two, and if it is sunk to a level with the ground, it will be out of the way of the scythe—an important consideration in a place that of all others should be kept regularly mowed.

"For a hedge for single lots," the holly, if possible; if not, the various arbor-vitæs, especially the American and Siberian. See our former essays on cemeteries, in the *Horticulturist* for last year.

(W. W.) The plant No. 1 is the Stagger-bush, *Andromeda Mariana*, growing in sandy, low places from Rhode Island to Virginia; the foliage is said to poison lambs and calves. No. 2 is Samphire, *Salicornia herbacea*. It is found along the Jersey sea-coast, in salt marshes, and at Salina, N. Y., and at other interior salt springs; so that Shakspeare's "dreadful trade" can be followed in America without risk. Name from *sal*, salt, and *cornu*, a horn: saline plants with horn-like branches. It is used on the English coasts as a pickle, and is quite good for that purpose; with the vinegar, it turns to a lively red color, something like red cabbage.

TRAINING THE DOG.—Col. Hutchinson's new work on training the dog (respecting which, several gentlemen have written to us, in consequence of a former short notice), is an English

work, and has never been published in this country; it might be, however, to some booksellers' advantage.

Horticultural Advertiser; Seneca Lake, Highland Nurseries. R. C. Frost, Havana: New York. This is an advertising sheet of Mr. Frost's Nurseries, and looks like a newspaper. This may be a good mode, but we cannot believe the plan equal in value to an insertion in the pages of the *Horticulturist*, which reaches thousands of those most likely to want Mr. Frost's goods. We have heard the expression, "every man his own washerwoman," but "every man his own advertiser," is at least novel.

(T. T. S.) The exhausting action of fruit is illustrated by the well known fact, that when plants cultivated for the sake of their flowers only, are permitted to ripen their fruit, the power of flowering in a succeeding season is diminished. This is seen in rhododendrons and azaleas. When the rhododendron goes out of flower, it forms clusters of seed vessels, which swell during the summer, and by the autumn become ripe; and they arrive at their size by feeding upon the organizable matter formed in branches, during summer, by the leaves. This organizable matter, if not consumed by the seed-vessels, is stored up, and applied to the formation of flowers; if it is consumed in the creation of fruit, it is abstracted from whatever means the plant may have of generating flowers. It is therefore obvious, that to prevent the formation of fruit, is to promote the future production of flowers, and, acting upon this principle, all good gardeners break off the young rhododendron fruit as soon as the flowers have fallen. The same rule applies to all other cases.

(A Subscriber, Andover, Mass.) Your tender roses may be safely wintered in a small pit dug below the frost, and aired as often as the weather will permit. If you have a cellar door exposed to the east, south, or the southeast, and the cellar is tight, place glass inside and below the door, so that it (the door) will open and shut above it. By this means, you may give light during the day, and keep out the cold at night. In such a ready-made pit, you may have, at a trifling cost, quite a winter greenhouse of lemon-trees, oleanders, camellias, &c., and some of your roses, if carefully potted, will give you bloom in the cool weather. Be careful to give air whenever it is of suitable temperature out of doors.

Blackberries.—A box of fine blackberries received on the 16th of September, from Mr. Lawton, speak loudly in favor of this now established luxury of all good gardens. They were superb. Several other articles came too late for notice this month.

Horticultural Societies.

Annual Horticultural Exhibition of the Pennsylvania Society, in September, at Jayne's Hall.—*Multum in parvo* may well be applied to such a sight. In the great Chinese Museum, our exhibition was almost a national one; the Committee, however, very ingeniously made the most of their space, and crowded it with many fine fruits, plants, and vegetables. The specimen plants were exceedingly well grown, though several of them had entirely too many stakes, wires, and other artistical trainings. Do away with such stiff taste; revise those prize lists, and in place of twenty plants, call for ten, and where twelve is required, adopt six, if you wish to diffuse competition, and to have even superior plants and more bloom. As it now is, the prizes are necessarily confined to a few large private or public growers: open the way for fifty competitors instead of five.

Of *grapes*, nearly a ton was exhibited, and though there was not a nine-pound bunch of Hamburgs, this year, yet, we believe, some weighed over seven pounds; the competition very evenly contested. Muscats and Frontignacs were certainly in profuse abundance—large berried, and heavy. But why do competitors not carry their fruit more carefully, and

retain all the bloom upon it? We did not see a new foreign grape; while native grapes increase in variety, and roll upon us with a flood. Several sorts, purely native, promise fairly to equal the Isabella and Catawba, though all our expectations for grapes for the table must be accomplished by actual hybridization with the foreign varieties.

Pears.—Nearly thirty native sorts were on the table; these will ultimately cut off all foreigners, with not over a dozen exceptions. The following beautiful sorts were remarkable: *Howell, Jones, Moyamensing, Andrews, Preble, Washington*, Philadelphia, and Seckel; there were several unnamed seedlings of the greatest promise.

Foreign Pears.—Mr. Chambers, of Mount Holly, N. J., contributed the largest variety, and shall we say Mr. Baxter contributed the best. Mr. B.'s fruit farm is something less than half an acre; and from all the facts and evidences before us, we say, rich soil and double working suits the pear. Another fact: all pear fruit grown under the influence of the city atmosphere, has a finer skin, a brighter color, and their outlines more perfectly developed, than any grown on country lands, however well tended. We have yet much to learn on that subject. Our best growers are only learners; and the day dawns when only twenty-five to forty sorts of pears will be generally cultivated.

Apples.—There were only two fairly passable lots.

Nectarines.—We have never seen the equal of that pile of STANWICKS; if we were to grow only one sort such, it would be the Stanwick.

Peaches were good, but in small variety. There was one new luscious seedling, too small in size for the vulgar eye.

Vegetables.—This is a vegetable season. Every article was of California size; indeed, out of proportion, but beautifully fine. This is surely a beet country. The Radish Beet, or new Long Blood Beet: skin, perfectly smooth; root, two feet long, and finely tapered; diameter, five inches, with a color as bright as crimson velvet; crisp and solid. Every gardener and every fruit grower should plant this beet.

Plants.—The new features were ferns, variegated plants, and hanging baskets; as many as sixty forms of variegated plants were in the room, and very attractive, from the expensive *Pandanus* to the simple and every-day *Hydrangea*. Ferns, under good care, have a charm to the cultivated eye, but we doubt of their being *the plant* for the million. In new ornamental plants not before exhibited, we noticed *Eugenia ugni*—in fruit, rather small for table use; and it does not come up to the impression the English have made upon us. *Tree Fern*, a gigantic affair; very tropical. *Pentas rosea*, more distinct than was expected. *Dracena picta* is very elegant amongst the variegated plants, and fully equal to any of that tribe. We must not overlook the highly extolled *Pampas Grass*—quite ornamental, but, we fear, too tender for culture north of Baltimore; for Southern lawns it will answer, as it resists heat and drought, is graceful in habit, and attractive in bloom, but far from being a forage plant, as was hoped.

The whole exhibition was creditable, but we have seen better. Was it not too early?

The Premiums.—The premium for the best collection of twenty plants was awarded to Mark Hill, gardener to Mr. Baldwin; the best, restricted to private growers, to James Pollock, gardener to Mr. J. Dundas; and the best collection of twelve plants to C. O'Brien, gardener to the President, Gen. Patterson. Mr. Felton, as usual, had a great display of vegetables, but for once the first premium was carried off by James Jones, gardener to Girard College. The first prize for twenty cut roses was awarded to R. Buist, who presented many novelties, as also did Mr. Dreer, who obtained the second. A. Frazer, gardener to D. Rodney King, exhibited an ornamental aquarium, very well got up, and also a large collection of dried green-house plants. Jerome Graff, gardener to Mr. Stuart, late Mr. Cope's, was again on hand with beautiful blooms of Nelumbrium speciosum, and a fine flower of the Victoria regia.

J. S. Levering's grapes in pots took the prize, though those from D. Ferguson were little inferior, and a great acquisition to the rooms. Neither the Diana nor Rebecca grapes made their appearance. Robert Cornelius received a premium for the Concord, which is *said* to ripen earlier; but with its strong foxy flavor it is inferior to the Isabella for those climates that will ripen the latter. The Northern Muscadine or well known red Fox grape, and the Charter Oak, might have staid at home. Mr. Isaac B. Baxter received the first prize for native grapes, among which was a seedling called "Penn," raised from the wild Frost grape, but with handsome bunches; also the "Ohio," differing little from the Frost. It is remarkable that the first and second premiums for peaches should have been both taken by seedlings; the first, to J. B. Baxter, was for a very large white variety. The great show of Stanwick Nectarines were from Mr. Stuart's, and took a first prize, as did R. Buist, for a collection of native pears—seventy-two kinds; the second to Mr. Parry. The best native

varieties, except Seckel, designated by premiums, were the Kingsessing and Washington, John Chambers carrying off the award for the best collection of foreign varieties; and to Mr. E. A. Vickey, that for the best collection of apples; second best to John Perkins, who produced a handsome seedling named Perkins.

Calendar of Operations.

OCTOBER.

THE VINEYARD.

BY R. BUCHANAN, CINCINNATI, OHIO.

THE VINTAGE.—No cultivation being required this month, it will simply be necessary to treat of the gathering in of the crop, and putting it away, which is termed, the *vintage*. A few extra hands will be required, and women, and girls and boys, will do as well as men. Each hand takes to the vineyard a knife and two buckets. The bunch of grapes is cut from the vine, and all unsound or unripe berries are picked off, and thrown into one bucket, and the bunch with the perfect fruit into the other. Any bunch of grapes not perfectly ripe, should be left on the vine to ripen, which may require a few days more. The buckets are emptied into barrels, and a cloth thrown over, to keep the bees and wasps out. In the evening, the barrels are hauled up to the wine-house, and the grapes, after being passed through a small mill, with a pair of wooden rollers, grooved, and placed three-fourths of an inch apart, or mashed in a long wooden vessel with a beater, so as to break the skins and pulp, but *not* the seed, are then thrown on the wine-press, and the juice pressed out and put into the wine casks, to ferment. About one-third of the juice runs off without pressure; three or four pressings are required to extract the remainder. The juice from the last pressing should be put with that from the refuse *grapes*, to make, with the addition of ten or twelve ounces of loaf sugar to the gallon, an inferior wine, which is usually sold at half price.

The pure juice from the perfect grapes requires *no* sugar. Fill the casks within one-fifth of their capacity, so as to allow room for fermentation. Lay a cloth over the bunghole, or put a straw stopper in, to let the gas escape, until the fermentation ceases; then bung tight. A tin siphon (one end in the bunghole, and the other in a bucket of water) is a very complete method of passing off the gas, with safety to the casks and to the wine. The fermentation generally ceases in about ten days.

After each pressing, cut six or eight inches off the outside of the "cheese" (the mass of mashed grapes), and throw them on the top. When the juice is all extracted, the "pummice" may be stowed away in tight casks, to give to the distillers, with the lees of the wine, to make brandy, or they may be thrown on the manure pile. As remarked last month, the press, the casks, and all vessels needed, should be perfectly clean, and kept in the neatest order. Further treatment of the wine will be noticed hereafter.

BY WILLIAM SAUNDERS.

VEGETABLE GARDEN.—Attend to the lifting of roots, as carrots, beets, &c.; such roots are best preserved in a cool cellar, secured from frost, packed in sand or dry earth. Parsnips may remain in the ground as long as possible, and even all winter. Potatoes are much affected with rot, and will consequently require extra attention. At the time of lifting, they should be got as dry as possible, and carefully picked over, rejecting all that show the slightest symptoms of decay. Those that are apparently sound should be spread out somewhat thinly, and covered with dry sand or earth. Charcoal dust is by far the best material for this purpose. Some years ago, when the disease was very prevalent, we saw several instances of the value of charcoal dust above all other expedients as a preserving agent. They should be completely covered over, so as to be entirely excluded from the direct action of the atmosphere.

All spare ground should be dug over, and weeds and other rubbish buried under. Cornstalks and such refuse, are valuable ingredients in clayey soils at this season; they decay slowly, and preserve a porosity which allows a thorough pulverization with frost.

Lettuces for early winter use should be planted in frames where protection can be given on cold nights, but they should have abundance of ventilation so long as the weather is open; heavy rains should be excluded.

Fruit.—In gathering winter fruit, the utmost attention should be given; the slightest bruise lays a foundation for decay. No fruit should be suffered to freeze (unless we except the Isabella Grape), and there is more likelihood of erring in allowing it to hang too long than in pulling it too soon. Most varieties of pears are improved by being picked before fully ripe; a cool, dark apartment, where there is little variation of temperature, is best adapted for keeping fruit.

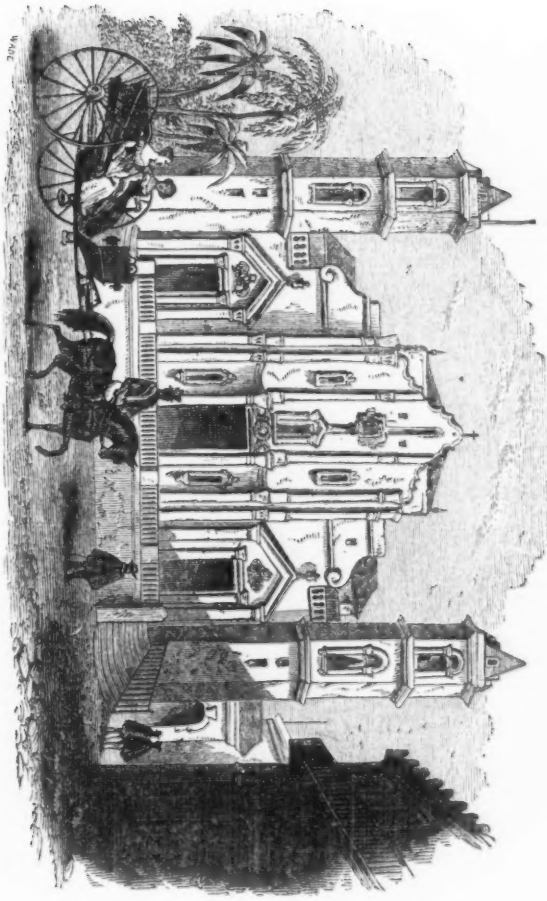
Grapery.—Where the borders are deep and imperfectly drained, it will be advisable to cover them, so as to throw off heavy rains. Ample ventilation may now be given; much, however, will depend upon the state of the plants. The wood ripening process should not receive any sudden checks, and, where there is a succulent growth, the house should be kept warm, in order to hasten maturity; keeping the borders dry, will materially assist in this respect.

The culture of grapes in pots is justly receiving more attention than it ever has done; they are easily cultivated, and as there is always much spare space in the interior of graperies, the crop may be very much increased by a row or two of plants in pots set on the floor of the house. A surprising quantity of fruit can be produced in this manner, without interfering with the regular crop on the rafters. Pot culture is also most convenient for a greenhouse, as pots admit of removal at any time required in the arrangement of the house.

Greenhouse.—Before the plants are arranged for winter, the house should be thoroughly cleaned. If not painted (which it should be once in four years at furthest), close it up, and fumigate by burning sulphur (where there are rafter plants, permanently planted, this fumigating cannot be done); this will destroy every vestige of insect or their larvæ. The plants should also be carefully cleaned, pots washed, and top dressed with fresh soil. The heating apparatus should also be examined, and any necessary repairs or alterations attended to. Heating by hot water is now much employed in large houses. In small greenhouses, the old furnace and flue system will answer every purpose as well as the most costly apparatus. The plants should be arranged so that the most tender will occupy the warmest position, and those of a more robust nature the coldest. The temperature should be kept as low as practicable at night, and well ventilated during day. Growth should not be excited at this season. Watering should always be done in the morning, and gradually withhold it from such plants as are approaching a state of rest. Now is the time to prepare plants for the winter, by getting them into a condition so that they will not require excitement either by water or heat. Cinnerarias, young fuchsias, geraniums, &c., that are growing slowly, should of course not be subjected to checks; they will grow fast enough if set on the front shelf, over the flue. The summer flowering gesneras, gloxinias, achimenes, &c., should not be neglected immediately after they cease blooming; they require careful waterings until the tubers mature, which will be indicated by the decay of foliage; they require it to be kept perfectly dry and warm during winter, either in the pots in which they were growing, or shake them out of the soil, and keep them covered in sand.

Pleasure Ground.—Planting Trees.—Those who intend planting this fall, should attend to it early this month. The relative advantage of fall and spring planting is open to much discussion. So much depends upon local circumstances, that diversity of opinion is of all things most likely. One man will set out a few trees about the middle of October; perhaps they are only transplanted from one part of his grounds to another. They start at once to grow at the root, and, before winter sets in, are well established. Another will receive trees from a distant nursery, plant them the first week in December, and the winter kills them, having no time for growth. In both cases, it is considered *fall planting*. The removal of a tree for a short distance, may be successfully effected at any season, with ordinary precaution. There is no risk in moving deciduous trees in June or July, if the young growths are pruned off and the smaller branches thinned, so that the foliage will be lessened. The whole of the foliage, indeed, may be taken off, but there is more risk from the sudden check to growth. The month of August and the first portion of September, is perhaps the worst for removal of free-growing trees, on account of their liability to make a growth which will not be matured before winter, and consequently endanger the life of the tree. Trees have been lost in that way; but such as horsechestnuts, lindens, &c., that make their growth early in the season, are not likely to start again at this time. Evergreens may be removed with great success during the summer months. Of course, there is care required in the operation as well as in the after treatment. Water should be freely applied to the roots immediately after planting. Evaporation from the leaves should be supplied externally, by keeping them wet for a few days, until root action is restored. Watering at roots only, will not answer the purpose, and many trees are destroyed through excessive care in keeping the roots constantly wet.

BOUVARDIA HOUTTEANA Schidl



THE CATHEDRAL AT HAVANA.

VIEW OF THE IMPERIAL DEL PASEO.